2015 PLN/ANR Minutes
Orlando, Florida - Aug 25 – 27
The Florida Hotel & Conference Center

Tuesday August 25

1:30 pm Introduction of Members and Guests (list of those attending part or all of the committee are listed at the end)

2:00 pm Florida Master Naturalist Program – Marty Main (UF) made a presentation about a Master Naturalist Program that is self-sustaining. He shared manuals and curriculum which are focused on freshwater systems, coastal systems and upland systems. Currently they have 155 instructors (presentation is attached at the end #1).

2:30 pm Updates from Administrative Advisors

- 1862 Advisor – James Trapp (OSU) Heads up on: 1) Significant $ for Cover Crops 2) EPA making changes on Pesticide Applicator Training (PAT) with increases in proposed training requirements with very little $ increases (Attachment #2) 3) 4-H will focus on pollinators education 4) Pollinator discussion regarding state plans and recommendations of saving commercial pollinators. There may be movement on using the Farm Bill for more $ and protection of pollinators and their issues. 4) Ron Brown is collecting information from states on use of antibiotics in feed. What to do? If you have training on this topic, please share with the other states. 5) Farm Bill Education Impacts (see attachment #3) – looking for summaries and success stories. Almost $3M went to extension for the effort and a current survey is documenting the effort from both extension and FSA. Draft handout of the resulting impacts was shared. 6) Fair Labor Act may impact extension agents and staff when dealing with overtime which could cause budget issues. Currently the group is looking to slow the process down and looking at an exemption for our organization. 7) National level of funding and more $ dedicated to health issues. 6) Water Issues – USDA/NIFA looking at $100M with $40M in competitive grants and $60M for center activities in 5 regions including 1890's. 8) Proposals about adding more institutions to the 1890's system with no increase in dollars (no new moneys). 9) ECOP and the oversight of Cornerstone Global for their lobbyist efforts during congressional hearings & debates. May be looking for $10k from each state in support. 10) Wanting feedback on the reporting system. Are we on the right timeline to address Congress and priorities that are established?
- 1890 Advisor – Ray McKinnie (VSU) discussed significant activities during 2015 for the 125 yr celebration of the 2nd Morrill act and the excellent reception and presentation made for the celebration in Washington. As discussed about the need to increase capacity within NIFA. There are still issues of some 1890's ability to receive sufficient match to receive all of the USDA funding.

3:00 pm Break with individual discussion about the Updates on 2014-2015 Plan of Work

3:30 pm Shared Regional On-line Training Resources – Marty Main/Gary Palmer/Todd Hurt. (Handouts, examples, and parts of the presentation attached at the end #4) Marty discussed the purpose of evolution of regional professional development and what they were commissioned to investigate. The avenues to deliver proficiency education to field agents and staff in the Ag and NR arena. He said there were some existing professional tests (like CCA). If a process was developed, it would need to have a registration fee and recognition of regional efforts. Other challenges included how to standardize the process. However, specialists wanted to move forward. The effort may have to take root first on a state basis so that scholarly activities of the efforts would be valued. He suggested that we table the regional effort until more modules are developed and what was learned at the state level can be expanded to the regional level. Suggestions were made that some communication be developed so that duplication is minimized and state collaboration increased. Todd felt that the great pace to host these modules/training were on eXtension and they were supportive to end user's. UGa uses Moodle but funding has been a question. They have wondered how testing and professional development is documented and had many of the questions for tracking agent progress and evaluation. Regional agreement on core and baseline agent materials has not been reached. Several examples: 60 or more courses exist on eXtension, and Marty has developed a spreadsheet with a summary of offerings. Texas has a Crop 101, LSU has Soybean 101 recording. Hubbard's group developed 17 modules for urban ag which took 18 month and about $100k. Recommendation: develop a white paper which would establish priorities for program leaders. Ask

directors to support these efforts. Martin Main presented a handout #5: Cost Recovery Program take home messages: 1. Identify the need you are going to address and how you are going to provide something that is not currently being provided. Why is your program worth paying for? 2. The audience and the scope of your program need to be appropriate for cost recovery to work. Who are your target audiences? 3. The content must be superior to other programs that are attempting to address similar goals. Can your target audiences get this info (similar qualifications) somewhere else? 4. Develop a strategic dissemination strategy that minimizes logistical headaches for those delivering the program and shares the rewards (e.g., revenues) generated by the program. Who will manage logistics- registration, shipping, money transactions, audits? 5. Provide a program that benefits customers sufficiently so they are willing to pay for the product. What do they get out of it besides an educational event? (e.g., affiliation, volunteer opportunities, professional development (CEUs, etc.), marketing power, etc.)

4:30 pm Joint North Central / Southern Region ANR PLN Meeting – Robert Burns. Burns (UT) reported on the joint regional meeting in Washington DC that was hosted at the APLU HQ. Federal agencies NIFA/NRCS/FSA/EPA were invited and discussion concerning existing and emerging issues were expressed. Burn wanted to continue the discussion with NRCS and the implications of educational programs and soil health division. The joint groups wanted to continue the effort for 2017. The tentative dates are June 6-8, 2017 and the SE planning group will be Grisso/Stewart/Mukhtar. For those that were unable to join the meeting, the presentations can be found at: https://tiny.utk.edu/SR_ANR_PLN

5:00 pm Farm Bill Impact Reporting –Miller / Lawton Reported that tools and education was delivered with joint effort between FSA and extension in each state. Travis reported that the Texas effort (attachment #6) had 201 meetings with over 10,000 contacts, with tool views of over 13,800. The average session length was 21 minutes during these views. He showed the google analytics and most of the views came from the Midwest. He encouraged the group to send in each state impacts in the survey gathering tool.

5:30 pm Adjourn

Wednesday August 26

8:00 am Measuring and Reporting Extension Programming Economic Impact – (Panel Discussion with Joseph Donaldson / Nancy Franz / Scott Cummings) Handouts and presentation attached at the end #7. Franz gave an overview, Cummings provided tips on economic focus must start at the beginning and the team needed, Donaldson provided 3 handout (cost effectiveness, cost benefits, return on investment and profitability).

9:15 am National Stakeholder PSEP Funding Effort – Carol Somody, Syngenta connected electronically (https://utia.zoom.us/j/528435199). Carol stated that EPA is introducing the most significant changes since the implementation in 1970. Carol discussed funding opportunity for the "Goal 1" states (attachment #2) and the funded states would be made public soon. Ross Love shared a spreadsheet of the comparison of their state rules and EPA proposed changes. Summary of the EPA proposed changes (currently under public comment) were distributed by email (Attachment #8).

10:00 am Break

10:30 am Southern Regional Forestry Update – Bill Hubbard (was moved to Thursday morning due to conflict with Director's committee)

11:00 am Regional Enhancing Grassland Sustainability Project – Pat Keyser and Gary Bates were connected electronically (https://utia.zoom.us/j/596649267) and described the project (See handout #9)

11:45 am Election of New Officers. The ANR-PLN Officers made nominations and they were accepted. Their terms will start following the PLN conference.

- ANR-PLN Secretary – Mellissa Stewart (WVSU)
- 1890 PLC Representative – Louie Rivers (KSU)

12:00 pm Lunch

1:30 pm Develop Action & Information Items, Accomplishments and Call times (Due at 3:00 pm)

2:15 pm Develop 2015-2016 Plan of Work – All Presentation and Action Plans are attachments #10 & #11. Upcoming conference call: October 27, 2015 (Tues) 10:00 am EST; November 17, 2015 (Tues) 10:00 am EST; February 2, 2016 (Fri) 10:00 am EST; May 11, 2016 (Wed) 10:00 am EST

3:00 pm Break – Following the break the group assembled with the general group and these items were reassigned: Discussion on Peer Review of Extension Specialists Teaching Scholarship –Grisso (rescheduled for Oct 27 Phone Conference listed above). Southern Extension Economics Committee Report will be made with Love's (OK) state report.
5:00 pm Adjourn

Evening ANR Committee Night Out (Main made plans and reservations-Miller's Ale House)

Thursday August 27

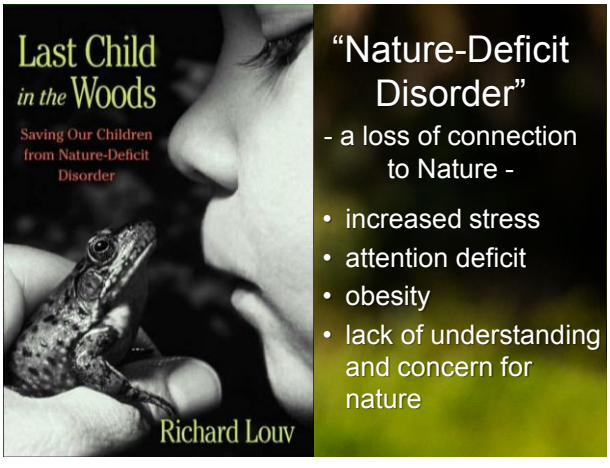
8:00 am Southern Regional Forestry Update - Hubbard made a presentation and provided an overview of the southern region extension forestry climate variation. (Report is attached #12)
8:45 am State Reports (Hard Copies Optional): LA (Mellion-Patin), WV (Stewart), FL (Mukhtar & Main), TX-Prairie View (Lawton), OK (Love), TN (Burns), VA (Grisso), AL-Auburn (Mask), TX-Agric-Life (Miller), AR (Cartwright), AL-Tuskgee (Karki)
10:00 am Adjourn

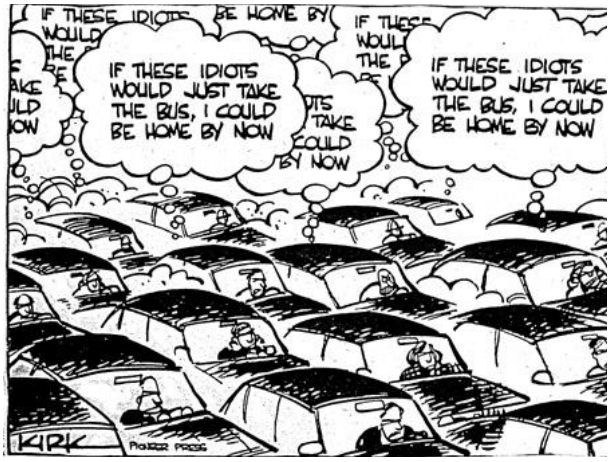
Attendees:

Robert Burns*, University of Tennessee
Billy Lawton*, Prairie View A&M University
Bobby Grisso*, Virginia Tech
Uma Karki, Tuskegee University
Anne Randle, Tuskegee University
Paul Mask, Auburn University
Rick Cartwright, University of Arkansas
Tony Windham, University of Arkansas
Marty Main, University of Florida
Saqib Mukhtar, University of Florida
Alejandro Bolques, Florida A&M University
Todd Hurt, University of Georgia
Bill Hubbard, University of Georgia (SREF)
Leslie Boby, University of Georgia (SREF)
Dan Geller, University of Georgia
Marion Simon, Kentucky State University
Louie Rivers, Jr., Kentucky State University
Gary Palmer, University of Kentucky
Dawn Mellion-Patin, Southern University Agriculture
Rogers Leonard, Louisiana State University AgCenter
Franklin Chuknuma, Alcorn State University
Berran Rogers, University of Maryland, Eastern Shore
Nelson Escebar, University of Maryland, Eastern Shore
Steve Martin, Mississippi State University
Joshua Idassi, North Carolina A&T State University
Tom Melton, North Carolina State University
Ross Love, Oklahoma State University
James Trapp, Oklahoma State University
Derrell Peel, Oklahoma State University
Edoe Agbodjan, South Carolina State University
Matthew Burns, Clemson University
Travis Miller, Texas A&M AgriLife Extension Service
Ray McKinnie, Virginia State University
Brian Benham, Virginia Tech
Melissa Stewart, West Virginia State University Extension

*SE-ANR-PLN Officers

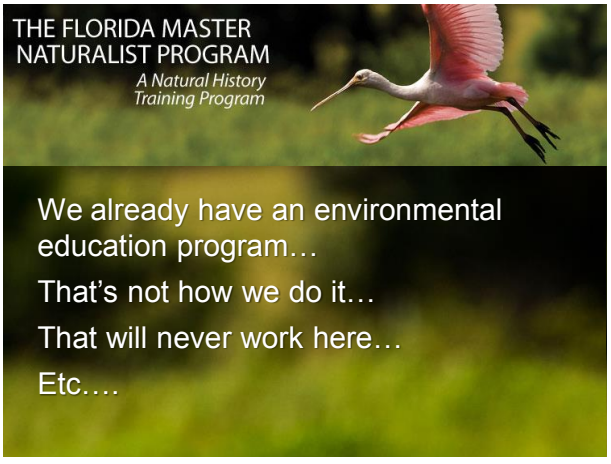
Attachment #1




IF THESE IDIOTS WOULD JUST TAKE THE BUS, I COULD BE HOME BY NOW
IF THESE IDIOTS WOULD JUST TAKE THE BUS, I COULD BE HOME BY NOW
KIRK


THE FLORIDA MASTER NATURALIST PROGRAM
A Natural History Training Program
What is the need? What are the goals?
• Expand nature education for children
• Build a stronger conservation ethic
• Educate, engage and empower citizens
• Support nature education/ecotourism industry
• Provide professional development


Florida Master Naturalist Program
A Natural History/Conservation Education Program
Dr. Martin Main
FMNP Program Leader
UF IFAS


THE FLORIDA MASTER NATURALIST PROGRAM
A Natural History Training Program
We already have an environmental education program…
That's not how we do it…
That will never work here…
Etc.…

THE FLORIDA MASTER NATURALIST PROGRAM

A Natural History Training Program

Your program must offer something different than what is widely offered -

- Adults only program
- Statewide perspectives
- Knowledge and skills development
- Consistent curricula and Certificate of Achievement

FMNP Core Curriculum

- Core modules have a statewide scope -

3 Core Modules (40 contact hrs.)

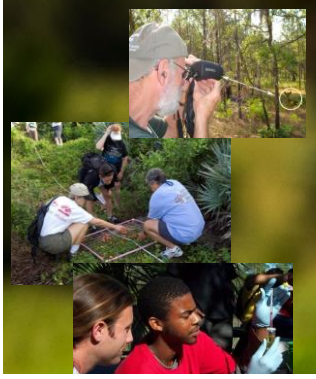
- Freshwater Systems
- Coastal Systems
- Upland Systems

Core Curriculum Content

- major components to each module -

- Ecological information
- Conservation issues and human dimensions
- Interpretation skills
- Synthesis of information and practical experience

FMNP Special Topics Courses



4 Special Topics (24 contact hrs.)

- Wildlife Monitoring
- Habitat Evaluation
- Conservation Science
- Environmental Interpretation

THE FLORIDA MASTER NATURALIST PROGRAM

A Natural History Training Program

How are you going to disseminate the program?

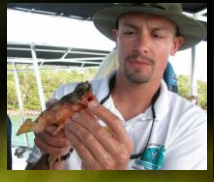
How are you going to manage logistics?

Florida Master Naturalist Instructor Network

THE FMNP INSTRUCTOR NETWORK

Who are the FMNP Instructors?

- Sea Grant & Extension Agents
- Natural Resource Agencies
- Parks, Zoos, Museums
- Nature Centers
- Academic Institutions
- Non-Profit Organizations



Pros and Cons?

THE FMNP INSTRUCTOR NETWORK

Advantages to FMNP, FSG, UF/IFAS

- Broader dissemination
- Capitalizes on expertise
- Promotes collaboration
- Promotes UF/IFAS (trademarked materials)

Disadvantages? – none

- Evaluations provide oversight

THE FMNP INSTRUCTOR NETWORK

Advantages to Instructors & Partners

- Delivery of a respected program (prestige)
- Train volunteers, promote other programs
- Shared revenues $75/student
- It's fun – and they can be creative

Disadvantages?

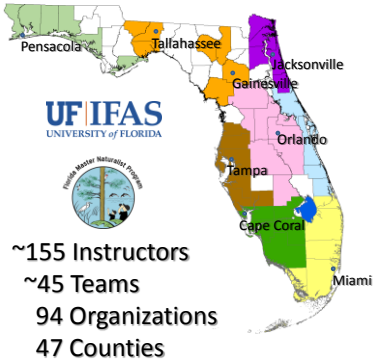
- It's a lot of work and time - but we make it as easy as possible

ASSISTING FMNP INSTRUCTORS

How do we assist Instructors?

- Manage registration process and market the course through the FMNP website
- Allow flexibility in course scheduling
- Manage all monetary transactions
- FMNP Instructor website for resources
- We are responsive to our Instructors

FMNP Participating Counties



~155 Instructors
~45 Teams
94 Organizations
47 Counties

THE FLORIDA MASTER NATURALIST PROGRAM

A Natural History Training Program

So what about the students?

Who are they and how do they benefit from the program?

(i.e,. Why will they pay for it?)

Florida Master Naturalist Students
… a diverse group…

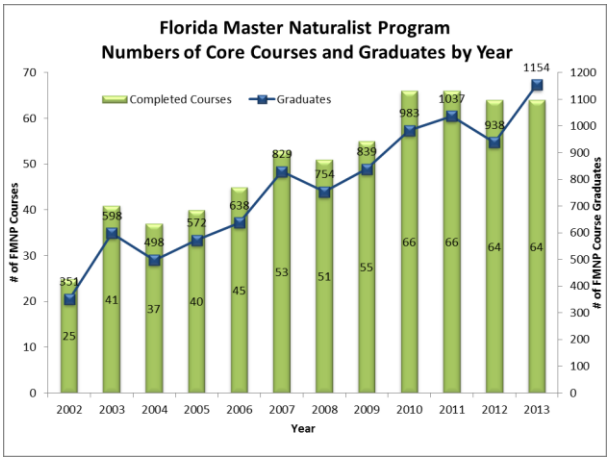
- Interested citizens
- K-12 teachers
- Ecotourism guides
- Park rangers and interpreters
- Environmental consultants
- Natural resource managers
- Elected officials
- Etc…..

Florida Master Naturalist Students
… a diverse group…

FMNP Graduates –

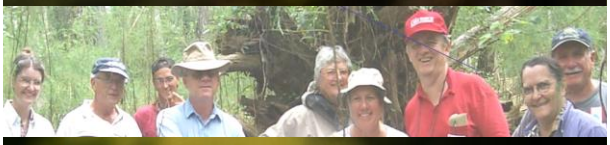
~ 70% continuing learners

~ 30% professional development



FMNP Graduates Have Fun

FMNP Graduates Find Fellowship



For some, this is a life-changing experience

Develop Knowledge and Skills

Professional Development

Nature Kayak Tours!

What are the pros and cons of having your program identified by businesses?

FMNP Professional Development-Testimonials

"I was Elementary Environmental Educator of the Year for Broward County 2004-2005. I use almost the entire FMNP in my classes."

"I am starting a new position as an Environmental Specialist with the county. Having FMNP on my resume helped me land the position!"

Why the FMNP does not require volunteer service

- We don't need the requirement
- Requirements would need to be enforced
- Time and funds
- Not exactly scholarly activity
- Exclusion of professionals (park rangers, teachers, lawyers, …)

Why the FMNP does not require volunteer service

Survey: 89% of FMNP graduates indicated they would not support mandatory volunteer service if doing so resulted in fewer professionals participating in FMNP classes

FMNP Registration Fees

- Core Modules = $225/class (40 contact hrs.)
- Special Topics = $150/class (24 contact hrs.)

FMNP Expenses

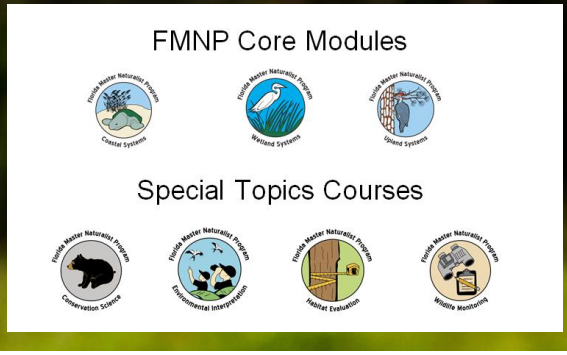
- Instructor revenues = 33-50%/course
- Registration, money mgmt.
- Materials printing and shipping
- Program office
- Surplus

Marketing the FMNP

FMNP website: ww.MasterNaturalist.org

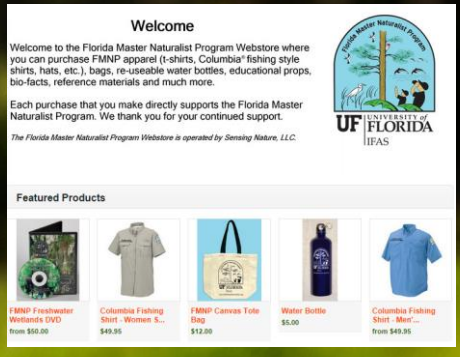
Marketing the FMNP

FMNP graduate pins and patches



Marketing the FMNP

FMNP logo products – the FMNP Store



Marketing the FMNP

FMNP marketing tools -

- Brochures, bumper stickers
- FMNP newsletter and listserve
- Advertisements in other newsletters
- Promotional presentations (CDs)
- Promotional displays for events
- TV clips of FMNP videos (5-6 min)
- Scholarships at fundraisers

UF IFAS UNIVERSITY of FLORIDA

FMNP Grads - *Making a Difference...*

- I have become active in…
- Our Final Project is being used…
- I present information to my students…
- I share information with my….
- Helped me do a better job…
- Helped me to get this job…
- Opened my eyes…
- Changed my life.

Cost-Recovery Program Best Management Practices

- Identify the need you are going to address and how you are going to provide something that is not currently being provided.
- The audience and the scope of your program need to be appropriate for cost recovery to work.
- The content must be superior to other programs that are attempting to address similar goals.

Cost-Recovery Program Best Management Practices

- Develop a strategic dissemination strategy that minimizes logistical headaches for those delivering the program and shares the rewards (e.g., revenues) generated by the program.
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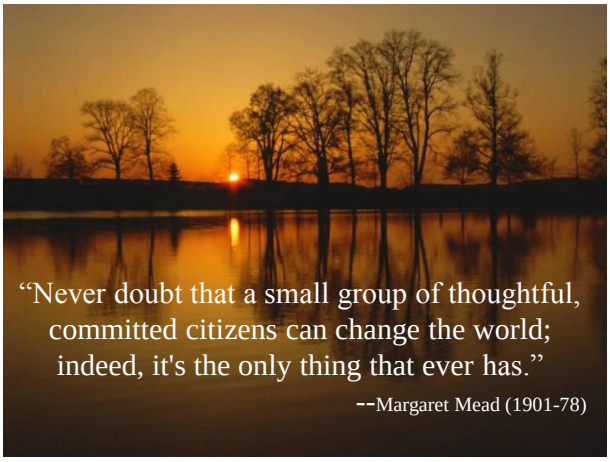

"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has."
--Margaret Mead (1901-78)

More Robust and Sustainable Pesticide Safety Education Programs ("Goal 1")
A Major National Effort

25% of PSEPs have less than ½ person to run their program
40% of PSEPs have less than $75,000/year to run their program (including salaries)

Request to Extension Directors

Provide leadership and proactive assistance to PSEPs pursuing Goal 1

National Stakeholder Team for PSEP Funding (http://psep.us/)

- Established in October, 2012; currently 107 members from 96 organizations
- Evaluating and supporting various opportunities for strengthening PSEPs; Goal 1 critical
- Founding premises:
  - Robust Land-Grant University Pesticide Safety Education Programs have unique value
  - All 50 states should have a robust Pesticide Safety Education Program

Goal 1 Statistics

- 25 states have signed 3-year contracts to pursue Goal 1 (>$1.8MM commitment by industry)
- States are diverse in size, location, and type and number of certified applicators
- States contain ~344,000 of the ~900,000 certified applicators (188,000 commercial, 156,000 private)

Goal 1 Minimum Contract Requirements

- Letters of commitment from State Lead Agency (SLA) and University Extension Administration
- Advisory committee with PSEP, SLA, and University Extension Administration representation
- Draft work plan within 6 months of receipt of funds
- Current PSEP balance sheet to the advisory committee within 6 months of receipt of funds
- Assessment of state laws and university policies that impact funding opportunities (year 1)
- Stakeholder team established in year 1, with quarterly meetings (e.g. teleconferences) once formed
- Assessment of legislative and other funding opportunities (years 1-3)
- Business plan development (years 1-3)
- Assessment of current or potential use of on-line and distance education (years 2-3)

Goal 1 Support from National Stakeholder Team

- ~75 members of the National Stakeholder Team actively involved in supporting Goal 1 efforts
- >6000 hours invested in 2014 (*excluding* work of advisory committees and state stakeholder teams)
- 12 National Goal 1 teleconferences, notes, and follow-up (October, 2014 - April, 2015)
- Goal 1 website
- PSEP business planning tool (April, 2015)

- National manual development workshop (May, 2015)
- Password-protected website, accessible only to the 50 PSEPs (August, 2015)
- Individual teleconferences with 17 state advisory committees (June – October, 2015)
- First National Dialogue on the Critical Need for IPM Support of Pesticide Safety Education (December, 2015)
- Resource development for use by PSEPS and their land-grant university and state lead agency partners (2014-16)
- Various types of support to Goal 1 states whenever requested (ongoing)

Barriers/Challenges to Goal 1 Success – Your Leadership Needed

- Workloads and other priorities resulting in a lack of time commitment to Goal 1
- Lack of attention to contract requirements and timelines
- Level of engagement and/or true commitment of advisory committee members to Goal 1
- Level of engagement and/or true commitment of stakeholder team members to Goal 1
- Lack of true interest in and/or understanding of pesticide safety education
- Lack of attention to defining a more effective pesticide safety education program
- Lack of attention to minor categories of certified applicators and/or consumer education
- Lack of attention to Goal 1 teleconference notes and other types of Goal 1 support
- Cursory assessments and reports
- Lack of expertise in organizing and directing this type of project

USDA Farm Service Agency and Cooperative Extension

EDUCATION for PRODUCERS

on New Farm/Ranch Programs

September 1, 2014 to June 30, 2015

As a result of the Agriculture Act of 2014 (farm bill), new programs were available to livestock, dairy, and crop producers. USDA Farm Service Agency (FSA) worked with Cooperative Extension, a function of land-grant universities, to help producers make informed decisions about program participation. These results represent survey responses from participants in joint Extension-FSA educational programs offered over a 10-month period by 40 land-grant universities. **These data are a subset of the larger Extension effort that included other meetings, individual consultations, and education through social media.**

AUDIENCE COMPOSITION

Total Survey Responses: **102,804**

- Dairy Producers - 2%
- Livestock Producers - 14%
- Extension Agent or Educators - 2%
- Land Owners - 18%
- Agency Personnel - 2%
- Industry Personal - 3%
- Crop Producers - 41%
- Other Participants - 4%

PROGRAM EVALUATION

On a scale of 1 to 7

	BEFORE	AFTER
Knowledge gained (**nearly DOUBLED**)	2.28	4.40
Quality of information and materials		5.15
Quality of presentations and programs		5.38
Degree to which participants intend to use the information		5.92

ETHNICITY/RACE

- African-American Black 1%
- Asian-American .3%
- Caucasian White 72%
- Hispanic Latino 1%
- More Than One Race 1%
- Native-American Alaskan Native 1%
- Unknown 25%
- Native Hawaiian Other Pacific Islander .04%

EXPECTED REVENUE PROTECTED BY PROGRAM PARTICIPATION

Farm Size by Revenue Protected	Percent (% of Participants Responding)	Revenue Protected (# Responding X Mid-Point)
$0 to $50,000	13%	$73,050,000
$50,000 to $99,999	23%	$389,400,000
$100,000 to $249,999	22%	$893,550,000
$250,000 to $499,999	19%	$1,660,875,000
$500,000 to $999,999	15%	$2,658,750,000
$1,000,000 plus	7%	$1,740,000,000

SOCIAL MEDIA OUTREACH

101.1 million Twitter messages communicating and promoting Farm Bill educational offerings or activities were sent by **11.5 thousand** people and received by **23.5 million** people.

Universities/Agencies with most "tweets"

@USDA	Dept. of Agriculture	4,700 K
@agchat	AgChat	767 K
@usdafsa	Farm Service Agency	368 K
@UNL_CropWatch	Univ. Nebraska-Lincoln Crop Watch	99 K
@USDA_NIFA	National Institute of Food and Agriculture	89 K
@KState	Kansas State University	81 K
@uaex_ag	University of Arkansas	78 K
@UMNExt	University of Minnosota	77 K
@ISUExtension	Iowa State Extension	72 K
@USDA_AMS	USDA Ag Marketing Service	57 K
@KStateResExt	Kansas State University Extension	47 K
@UNLExtension	Univ. Nebraska-Lincoln Extension	32 K
@kstateagecon	Kansas State Ag Econ	28 K

Cooperative Extension – National System, Local Results:

This unique network of educators links locally-based educators with faculty from 110 land-grant universities – along with federal, state and local partners – to people in more than 3,000 counties/parishes in all 50 states, the District of Columbia, and U.S. territories. More than 100 years old, this system has one unifying core: It works!

What Does Cooperative Extension Do? See results at www.landgrantimpacts.org.

- Translates science for practical application and uncovers relevant research questions.
- Engages individuals, families, communities, and agricultural businesses resulting in sustained adoption of beneficial behaviors.
- Develops partnerships to take action addressing vexing local, state, and national needs.
- Prepares people for healthy, productive lives.
- Provides rapid response in times of disasters and emergencies.

Why is Extension Valued?

- Established partnership with USDA through the National Institute of Food and Agriculture.
- Sustained infrastructure through capacity funding that can be expanded to deliver educational programs and sustain long-term local connections.
- Distributed network focused on local needs with the ability to respond nationally when needed.
- Integrated with the research and teaching of the nationwide Land-grant University System.
- Ability to engage learners in measurable changes in behavior.
- Connection to limited resource audiences, including the rural poor, and people served by historically black and tribal colleges and universities.
- Added value through www.extension.org, Cooperative Extension's online learning network.

Why partner with Cooperative Extension?

Cooperative Extension has the infrastructure, capability and institutional history to be USDA's transformational educators. The integration of Extension's educational delivery capacity with selected USDA programs, agencies and mission areas can help the USDA achieve its leadership mission in the United States and globally. For those USDA agencies authorized to extend knowledge to people, communities, and agricultural businesses where they live and work, it is prudent for USDA to widely engage Cooperative Extension. During a recent period of unprecedented economic strain, federal agencies are called upon to leverage assets, complement competencies, and invest in quantifiable efficiencies for program delivery. To ensure the future strength of our Nation, an educated public is essential.

Learn More:

Cooperative Extension is coordinated nationally by the Extension Committee on Organization and Policy (ECOP). For more information, call 202.478.6088, email **jane.schuchardt@extension.org** or **sandy.ruble@extension.org**, or visit **http://ecopmondayminute.blogspot.com** or **www.extension.org/ecop**.

August 2015

—COOPERATIVE—
EXTENSION
Extending Knowledge, Changing Lives

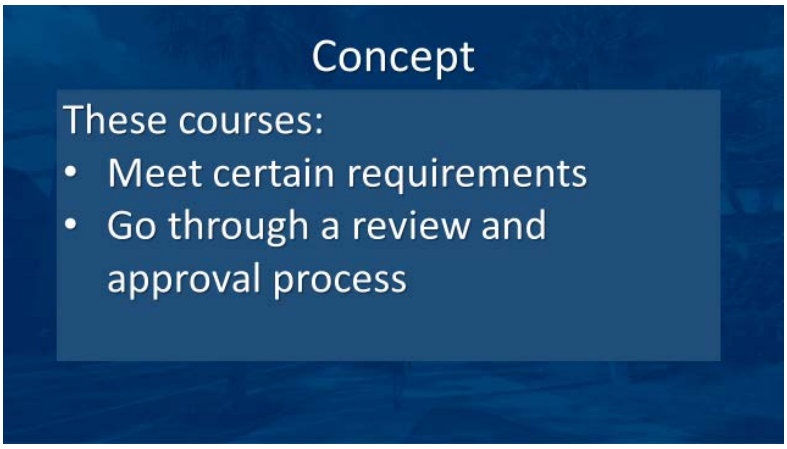
eXtension

2015 Extension Specialist Symposium – M Main ppt notes

Todd, Gary and I have been working on a concept and potential approach regarding professional development training courses. I've got some white papers that describe this concept that are being passed out.

The idea we discussed was to establish online professional development training

- To develop technical expertise among our extension faculty
- that can be widely recognized for establishing some level of proficiency
- that capitalizes on the expertise available in multiple states
- and that recognizes/rewards those faculty who develop the training programs



Many programs exist already – but we also discussed developing guidelines for new courses and a review process that would vet these courses – something that isn't required regionally or even within many states.

Peer review of professional development courses may or may not be needed, but is required for other scholarly materials – journal articles, fact sheets, formal teaching courses for the classroom, programs that lead to certifications. All go through some form of peer-review and are vetted prior to release.

So what would something like this look like?

These courses could address topics at a statewide or even a regional level so they have recognized value. The courses will likely need to conform to some level of standardization that includes proficiency testing. The option exists to have these courses reviewed and approved – e.g., by a Review Committee that functions like an editorial board.

The courses can be made available through eXtension, which provides server maintenance, technical support, and end user support for members at premium institutions. eXtension is willing to collect course fees of which the funds are returned to the developing institution minus the credit card fees. The potential exists to create a revenue stream of programmatic funds for authors and institutions, especially if the courses are deemed widely valuable to multiple audiences.

Why do it? The job of extension specialists includes the development of scholarly material, so this could be considered a responsibility. Our teaching faculty develop courses, why not expect similar products from our extension specialists? A high quality online extension course certainly qualifies as scholarly material, especially if it is widely used and valued by extension faculty and by other audiences, such as students and the private sector.

An online course can reach larger audiences and has greater longevity than an in-person in-service training (IST = professional development training). In-person ISTs are very valuable, but not everyone can attend every IST. Developing an online training program addresses that problem and can create opportunity to make advancements in the ISTs offered over time, which could ultimately be included in a suite of online training courses addressing particular topics (e.g., plant diseases, etc.).

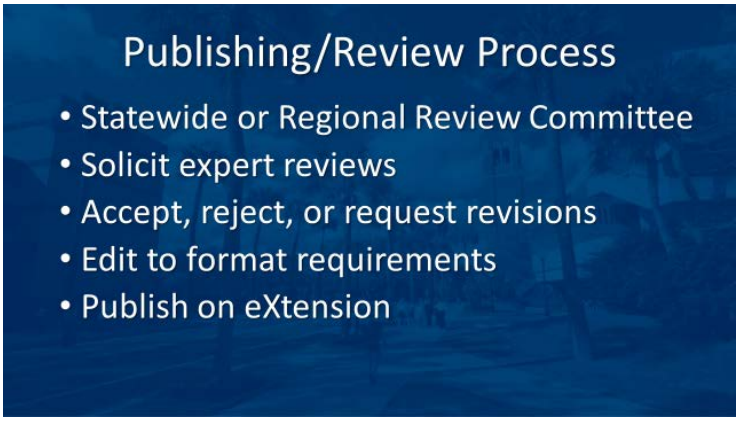
Developing these types of courses will take work – especially if they are to be relevant statewide or regionally. This is going to require collaboration, and provides a reason for developing new relationships that could eventually promote collaboration in research and other projects.

Assisting county faculty to become increasingly skilled also creates new opportunities for collaboration, as well as contributing to programming efforts. And the system lends itself both to having metrics such as numbers of persons taking the course, their knowledge gain through pre- and post-testing, and potentially a revenue stream.

Benefits also accrue to county faculty of course.

They progress in their professional development, become increasingly expert in their program area, become more interdependent, i.e., able to work with specialists to deliver higher-level programmatic activities without the specialist actually being present.

This also opens doors for greater collaboration on grants and projects with specialists and ultimately results in a more specialized extension work force and better extension programs.



It would take longer. No sense in kidding ourselves, but that's the price of peer review.

Maybe peer review is not needed for these courses. We don't currently do any type of peer-review for professional development through traditional ISTs or webinars. Perhaps there are other ways to identify inaccuracies and needed updates to programs, such as online comments. This is an area that needs additional discussion.

I have since discussed this concept at my university with the Dean of Extension, the Director of Professional Development at UF/IFAS, and with about 100 extension specialists. There was a lot of interest in this idea, but the interest and the support are mostly state-specific at this time.

Developing individual state programs may build the framework for creating regional training programs. In Florida, there was much more interest in developing this concept within the state (i.e., state-specific training) – and maybe that's not a bad way to begin. There were also questions about the peer-review process and whether it was really necessary for reasons stated above. Also, there was greater interest in placing training programs for Florida extension faculty on the UF/IFAS Professional Development website rather than an eXtension website (at this time).

Making websites/ direct links to online training courses available to the Southern Region ANR-PLN would provide an alternative to having courses available only through eXtension. Since the ANR-PLN meeting in Orlando, I've had additional meetings with the Dean and Extension Leadership at UF/IFAS and we are moving forward to have all online Extension training programs placed on the UF/IFAS Program Development and Evaluation Center website http://pdec.ifas.ufl.edu/. This site should be populated with multiple courses during 2016.

The Abilene Paradox….(see below). At the end of the presentation I mentioned the Abilene Paradox, which is the phenomenon where a group agrees to do something that many or none of the individuals actually want to do… but everyone agrees so as not to be contrary. Despite the Abilene warning, the ANR group indicated genuine interest in the idea of sharing professional development training among the SR ANR-PLN. I thought that was pretty impressive.

Abilene Paradox: The term was introduced by management expert Jerry B. Harvey in his 1974 article The Abilene Paradox: The Management of Agreement. The name of the phenomenon comes from an anecdote in the article which Harvey uses to elucidate the paradox:

"On a hot afternoon visiting in Coleman, Texas, the family is comfortably playing dominoes on a porch, until the father-in-law suggests that they take a trip to Abilene [53 miles north] for dinner. The wife says, "Sounds like a great idea." The husband, despite having reservations because the drive is long and hot, thinks that his preferences must be out-of-step with the group and says, "Sounds good to me. I just

hope your mother wants to go." The mother-in-law then says, "Of course I want to go. I haven't been to Abilene in a long time."

The drive is hot, dusty, and long. When they arrive at the cafeteria, the food is as bad as the drive. They arrive back home four hours later, exhausted.

One of them dishonestly says, "It was a great trip, wasn't it?" The mother-in-law says that, actually, she would rather have stayed home, but went along since the other three were so enthusiastic. The husband says, "I wasn't delighted to be doing what we were doing. I only went to satisfy the rest of you." The wife says, "I just went along to keep you happy. I would have had to be crazy to want to go out in the heat like that." The father-in-law then says that he only suggested it because he thought the others might be bored.

The group sits back, perplexed that they together decided to take a trip which none of them wanted. They each would have preferred to sit comfortably, but did not admit to it when they still had time to enjoy the afternoon."

Regional Professional Development for Extension Faculty via Online Moodle Courses

Situation

Cooperative Extension faculty (agents and specialists) often require new or updated expertise to effectively provide educational programs to address issues associated with agricultural production and management of natural resources. Often this expertise must be learned after employment and in many cases additional training is needed to update skills and knowledge as new information becomes available.

Professional development and training opportunities are therefore critical to maintain a highly skilled workforce. In many instances, professional development opportunities can be delivered effectively and at less cost via online training programs such as may be offered through Moodle courses.

While there are countless ways to deliver information on the internet this leadership team believes that an effective regional training model is best designed in a system that allows for an asynchronous classroom style learning management system. The ideal online classroom measures competency and knowledge gained through pre- and post-tests. Asynchronous classrooms allow the instructor and the students to work independently as their schedules allow for busy professionals.

The eXtension Campus (campus.extension.org) is part of the national Extension Collaborative and is available to institutions that support eXtension at the premium level. Most of the institutions in the Southern region are already supporting this collaborative. This is a list of premium members as of January 2015:

Premium Members
Auburn University
Clemson University
Colorado State University
Cornell University
Fort Valley State University
Langston University
Louisiana State University
Michigan State University
Mississippi State University
Montana State University
North Carolina State University
N. Dakota State University
New Mexico State University
Northern Marianas College
Ohio State University
Oklahoma State University
Oregon State University
Penn State University
Purdue University
Rutgers University
Texas A&M University
University of Missouri
University of Alaska Fairbanks
University of Arkansas
University of Delaware
University of Florida
University of Georgia
University of Idaho
University of Kentucky
University of Maryland
University of Minnesota
University of Nebraska
University of New Hampshire
University of Tennessee
University of Vermont
University of Wisconsin
Utah State University
Virginia Tech

eXtension uses the Moodle learning management system to provide online courses to train extension agents and specialists. Moodle is an open source software that is used by over 70 million people worldwide (https://moodle.net/stats/). Since Moodle is not proprietary software faculty members can freely export their courses to local servers should the need arise. eXtension provides the server maintenance, technical support, and end user support for members at premium institutions. Course developers can offer their classes for free or they may ask eXtension to collect course fees of which the funds are returned to the developing institution minus the credit card fees.

This leadership team identified 69 Moodle courses developed by Southern Region institutions in the eXtension campus that contained ANR subject matter. Most are being offered for no charge but are often limited in geographic scope. This leadership team believes regional models will allow for greater collaboration between states. One such example is the "Weeds of the Southeastern US," course developed by Drs. Todd Hurt, Ken Lewis, and Eric Prostko of University of Georgia Extension:

> Welcome to the Weeds of the Southeast web course for Extension. This is a self-study course designed to equip you with basic weed ID knowledge. It is divided into three main divisions: Weeds Common in Cultivated Land, Turf Weeds and Pasture/Hay weeds. Before you begin each section we ask that you take the self-graded pre-quiz so we may follow your professional improvement in the use of this course.
> (See course access information appended to this document)

Access to training courses can be controlled by username and password and registration fees can also be charged for taking courses. The benefits of a registration fee for courses include:

- Recovery funds for time and effort dedicated to developing high quality training programs
- Programmatic funds as Incentives to extension specialists for developing the courses (e.g., revenues can be returned as programmatic support)
- Facilitates collaborative efforts among faculty and universities, including course development, external funding, and associated collaborative work
- Extension fund revenues to the host University or Universities

Potential obstacles identified for developing Moodle-type online training programs include developing:

- Support for converting technical information (course material) into a Moodle framework (someone with these types of programming skills would need to be hired)
- A regional course registration pricing and revenue distribution plan
- A regional system for identifying needs, conducting peer review, and formal approval of courses (e.g., Southern Region PLN-ANR approved training program)
- A regional system for rewarding extension faculty for completing training, such as a Regional Certificate of Achievement recognizing approved courses

Objectives

The objectives of this committee are to provide needed professional training to maintain an effective and highly skilled extension faculty in the Southern Region. The strategy proposed to do so is via the development of a suite of online Moodle courses that will be available through the eXtension website.

Training courses will be broadly prioritized for agricultural and natural resources extension faculty and will be:

- Developed by one or more Extension Specialists from one or more universities
- Consistent with a decided upon course format (e.g., pre- and post-testing, etc.)
- Submitted through a review and approval process
- Made available to extension faculty through eXtension

Needs/Next Steps

The ANR Professional Development Training Committee proposes that the ANR Program Leaders from each participant university in the Southern Region establish a committee composed of extension faculty to:

- Identify priority training needs in agriculture and natural resources
- Identify potential specialists who could potentially lead or contribute to the development of prioritized training courses
- Meet with the committee leaders from other states in the Region to create a list of priority training courses needed
- Present the prioritized list and potential course authors to Program Leaders

Program Leaders will need to

- Facilitate a meeting of identified specialists to discuss course development and funding needs
- Assist in securing support for converting course material into the eXtension moodle format
- Identify a peer-review and approval process for training courses
- Develop a means of Regional recognition for completion of training

Weeds of the Southeast
Access and Instructions

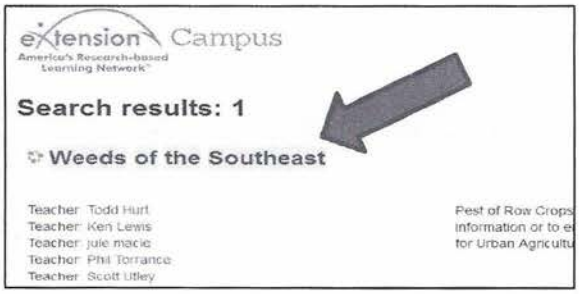
The goal of this pre-quiz is to assess your current level of weed ID knowledge, not your ability to use resource books. You are expected to do your own work without assistance from other people or resources. These are NOT open book tests. It is expected to see improvement in your scores before and after you complete the module and practice weed ID. The goal of this "test" is not to see who can score the highest but rather to help you identify your strengths and weaknesses in order to focus on problem species for you. For a fair assessment prior study before taking the pre-quiz is discouraged.

1. Access the eXtension Campus web page at: http://campus.extension.org/

2. Establish an account (even if you already have an eXtension user name and password). Look on the left side of the page, near the middle.

4. Once you have established your account and logged on, search for the course by typing "**Weeds of the Southeast**" into the search box OR for return visits you can click on "My Courses" in the Navigation column.

5. Click on "Weeds of the Southeast"



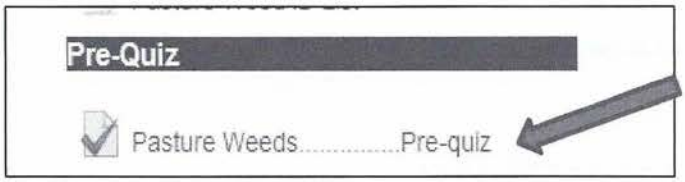
* Enroll using the enrollment key of "*Poa*" without the quotes.

6. Scroll down to the course that you wish to access: Weeds Common in Row Crops, Weeds in Pasture and Hay Fields or Turf Weeds.

7. Click on the Weed ID List and print it. You will need this to take the quiz as it lists the weeds along with their course ID number. You may enter either the weed number or the common name in the box below each image, however, using the weed number is strongly encouraged as

spelling and spacing must be exactly as it appears on the list.

8. Click on the Weed ID Pre-Quiz to begin the exercise. Follow the instructions and links to take the quiz.



All pre-quizzes are timed events that allow approximately 54 seconds per response. The system will only allow you to take a pre-quiz once.

9. Make sure you hit the ***Submit all and Finish*** button at the bottom of the "Summary of Attempt Page" Your scores may be viewed immediately upon completion of the quiz.

10. Once you have completed the pre-quiz the course educational tools and links will become available to you.

Pre-quiz Results: Upon completion of the Pre-quiz you should be able to view your answers, weed images and correct answers. You can review your test and answers by:

- Select "Weed ID Pre-quiz" in the appropriate module section.
- Then click on the *"Review"* in blue letters on the Weed ID Pre-Quiz page.

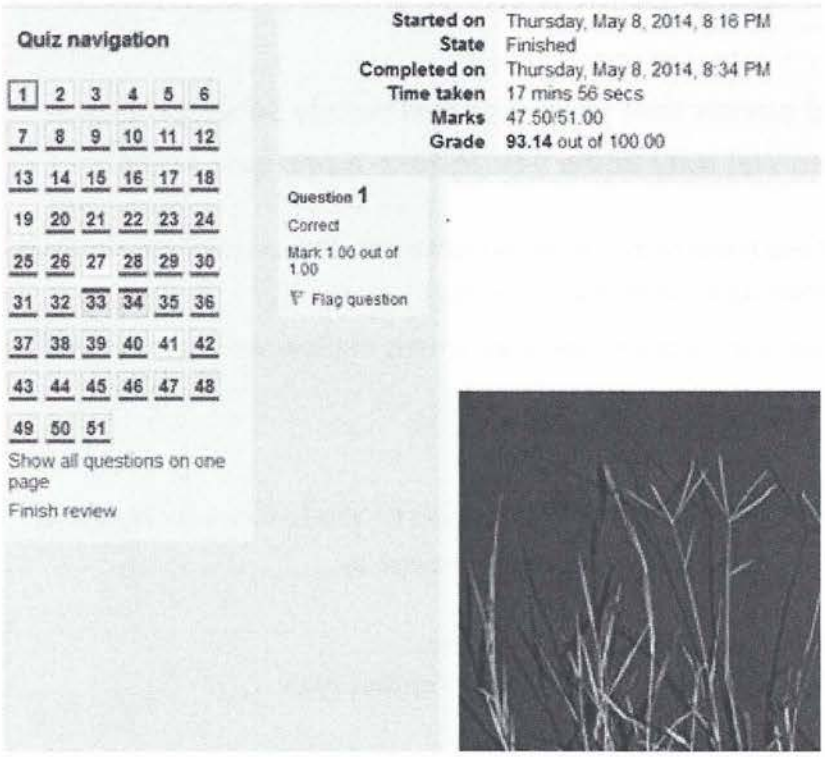
On the Quiz navigation page you will see a summary of your results and can review the images and responses in three ways:

1. Use the Quiz navigation panel to select specific test questions. Green are correct, yellow partial credit and red are incorrect.

2. Use the "Next" button below the weed image to review questions one at a time.

3. Selecting the "Show all questions on one page" in the Quiz navigation panel allows you to scroll through questions.

Finish Review closes this section and takes you back to the Weed ID Pre-quiz page.



Martin Main, UF/IFAS mmain@ufl.edu

Florida Master Naturalist Program (www.MasterNaturalist.org)

Cost Recovery Program take home messages:

1. Identify the need you are going to address and how you are going to provide something that is not currently being provided. Why is your program worth paying for?
2. The audience and the scope of your program need to be appropriate for cost recovery to work. Who are your target audiences?
3. The content must be superior to other programs that are attempting to address similar goals. Can your target audiences get this info somewhere else as good or better?
4. Develop a strategic dissemination strategy that minimizes logistical headaches for those delivering the program and shares the rewards (e.g., revenues) generated by the program. Who will manage logistics – registration, shipping, money transactions, audits?
5. Provide a program that benefits customers sufficiently so they are willing to pay for the product. What do they get out of it besides an educational event? (e.g., affiliation, volunteer opportunities, professional development (CEUs, etc.), marketing power, etc.)

TEXAS A&M AGRILIFE EXTENSION

Sustaining Agricultural Production through Education

Economic Impact Series

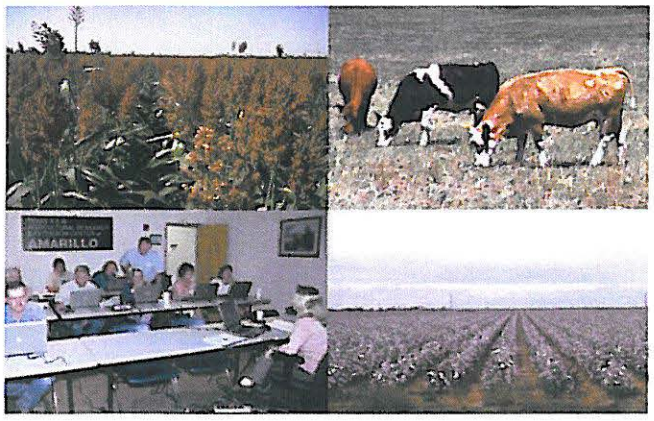
Challenges Facing Texas Farmers and Ranchers

- Changing global markets and the management of agricultural production and price risk have farmers and ranchers seeking ways to maximize production efficiency to maintain competitiveness.
- Issues regarding Texas' water supply and demand balance have brought about the need for more efficient use of this vital resource.
- Rising input costs and various production-related challenges, including droughts, have placed serious stress on farmers and ranchers across the state.

AgriLife Extension's Response

In agriculture, the Texas A&M AgriLife Extension Service delivers wide-ranging education focused on research-based production and management practices, evaluation of technologies, improved decision-making, water use efficiency, and job training.

- Programs for crop producers cover variety testing, irrigation efficiency, disease and pest identification and management, and managing financial risk.
- Programs for livestock operations focus on improved reproduction strategies, animal health, feeds and nutrition, forage production, and breeding stock replacement strategies.



- AgriLife Extension is at the forefront in responding to emerging issues such as drought, wildfires, and insect and disease outbreaks.
- Through 12,800 educational events, planning meetings, and workshops in 2013, AgriLife Extension reached more than 570,000 educational contacts.
- AgriLife Extension frequently partners with industry groups and other local and state government agencies in delivering educational programs.

Economic Impact

Selected programs are highlighted here, where the impacts were measured by the increase in net returns associated with adoption of certain management practices taught in 2013.

- Livestock and dairy production programs resulted in an estimated economic gain of $30 million, while programs focused on managing financial risk resulted in potential gains of $29 million.
- Outreach related to crops, floriculture, and nursery production led to an estimated increase in annual net returns of $48.4 million, and $237 million for cotton variety testing and education since 2000.
- Extension plays a significant role in the boll weevil eradication program, which had estimated benefits of $294 million in 2013, with cumulative benefits of nearly $3 billion since 1996.
- These impacts supported an additional 3,120 jobs in agribusiness and retail-related sectors.
- Job training through continuing education related to pesticide safety, cotton ginning, and beef cattle handling supports 27,521 Texas jobs, with an annual wage base of $844 million.

Contact:

Douglas L. Steele, Director
Texas A&M AgriLife Extension Service
ph. 979.845.7967
e-mail: dsteele@tamu.edu
agrilifeextension.tamu.edu/impacts

MKT-3558BM I 2014

Extending Knowledge | Providing Solutions
AgriLifeExtension.tamu.edu

The Cooperative Extension Program Development Model: Adapting to a Changing Context

Journal of Human Sciences and Extension June 2015 Special Issue (http://www.jhseonline.com)

For over 100 years, Cooperative Extension in the United States has used a consistently articulated program development model including program planning, design and implementation, and evaluation that involves stakeholders in the process. This issue of the Journal of Human Sciences and Extension examines the history and evolution of the program development model for successful Extension work and adaptations to that model that have emerged due to the changing educational context. This issue provides information on how elements of the model have changed over the last 100 years; delves into contemporary issues and challenges; and provides important analysis, implications, lessons learned, and applications for current and future success of Extension programs.

Issue Contents

This issue of *JHSE* joins the following Extension texts as critical professional development resources for current and future Extension professionals:

- *Education Through Cooperative Extension* (3rd ed.) by Seevers and Graham (2012)
- *Program Evaluation in a Complex Organizational System: Lesson From Cooperative Extension* by Braverman, Engle, Arnold, and Rennekamp (2008)

Measuring and Articulating Extension's Public Value: Passing Fad or New Normal?

Dr. Nancy Franz
Iowa State University
Professor Emeritus, School of Education

Other Keynote Titles

Thwarting organizational decline through public value measurement and articulation

The Southern Region: The Way Extension Should Be!

"Ultimately, we in Extension are responsible for telling and being the heroes of our own story...whether [Extension] will persist into the future or decay as a relic of times gone by."

Stafne (2010). Injecting Extension into the American Zeitgeist, *Journal of Extension,* 53(3).

A Public Value Lens Helps us Consider:

- How we matter to voters, academics, elected officials, and other stakeholders
- How to move ECOP/APLU from articulating Extension outputs to instead articulating publically valued outcomes
- Being funded based on outcomes/impacts
- Programming and staffing based on value
- Organizing ourselves by value instead of academic disciplines or program areas
- Millennials as the major power base and older adults as a growing resource use group

The Public Value Movement

- 1990 – Public administration – Mark Moore
  - Effectiveness and efficiency of government
  - Just and fair society
- 2004 – Extension – Laura Kalambokidis
  - Narrowing an information gap
  - Fairness or justice of resource distributions
  - Reducing costs or increasing benefits for stakeholders
  - Public good

Why Focus on Public Value?

- Loss of public funding and program support
- Evidence-based movement
- Return on investment movement
- The political context- government relations
- Standards-based movement
- Need more than customers feeling good about Extension to remain viable

What is Public Value?

The value of a program to those who do not directly benefit from the program.

Laura Kalambokidis
University of Minnesota Extension

What is Private Value?

Personal value derived directly from an Extension educational opportunity.

Nancy Franz
Iowa State University

Extension Value Stories

- Teen court
  - Private – youth stay out of court
  - Public – reduced court and human services costs
- Citizen's leadership academy
  - Private – gain public speaking skills
  - Public – sustain civil society by developing public leaders

Extension Public Value Stories

- IPM
  - Private – save $ by reducing inputs
  - Public – improve water quality
- Nutrition education
  - Private – increase intake of fruits and vegetables
  - Public – decrease health care costs

Extension Public Value Efforts

- Organizational Development
- Professional Development
- Program Development
- Scholarship Development

Organizational Development

- Recommended strategies
- Impact evaluation positions
- Performance expectations and metrics
- Revenue generation expectations and incentives
- Impact reporting systems
- Materials to use with stakeholders

Professional Development

- Face-to-face and online workshops to create public value statements and stories
- Annual conferences, professional associations, work team meetings, and other venues
- Extension public value blog
- Extension public value network Facebook page
- AEA, eXtension, NAEPSDP, ACE tools and presentations

Program Development

Public value amplification and integration into:

- Environmental scanning and situation analysis
- Program design
- Program implementation
- Program evaluation
- Program reporting

Transformative learning approach

Scholarship Development

- Special issue of JHSE on Extension program development model
- Public value embedded in engaged scholarship
- Promotion and tenure dossier workshops
- Campus engagement centers
- Scholarship incentives
- Training to work with communities
- Engaged scholarship equal to research and teaching scholarship
- Holistic approach to public value articulation

Public Value Lessons- Organizational Development

- Intentional and ongoing organizational development
- Sooner rather than later
- Avoid top down approaches
- Multiple behavior change supports
- Venues for meaningful and deep discussion
- The need for PV champions

Public Value Lessons- Professional Development

- Model effective adult education and transformative learning environments
- Model effective group process techniques
- Provide resources for direct application
- Socially engineer participation
- Include a variety of perspectives
- Depth of public value understanding and skill development

Public Value Lessons - Program Development

- Use social media and technology advancements
- Work with early adopters
- Engage a variety of perspectives
- Avoid information dissemination and other one way, short term relationships with clients if the goal is public value

Public Value Lessons – Scholarship Development

- Research needs to show the connection between Extension education and public value
- Adopt social return on investment as a methodology
- Build on the history and vision of engaged scholarship vs. replication of research and teaching scholarship criteria
- Recognition, rewards, and P&T matter

The South as PV Champion

- Use the private and organizational value of PLN to become an Extension Public Value hub (Franz, Stovall, & Owen, 2010).
  - Enhance individual performance and critical thinking
  - Catalyze best practices
  - Provide opportunities for leadership and skill development
  - Enhance relationships between Extension programs
  - Serve as a think tank for regional and national initiatives

The South as PV Champion

Fund public value studies across the region similar to PROSPER and MN Master Gardeners

- Food systems impact on health, the economy, and human development
- The impact of community leadership development
- The prevention of economic disaster and improved human health through food safety

The South as PV Champion

Build on Laura Downey's efforts to quantify the public value ability in Extension staff

- Replicate it across the region to increase rigor and confirm measures
- Add to this initial quantification of public value in Extension
- Use the results to inform region-wide professional development, hiring, and public value measurement and articulation

The South as PV Champion

Host a national public value institute/forum

- Create and share PV best practices and lessons learned
- Push ECOP to get to program and organizational impact
- Highlight and encourage Extension scholarship on public value
- Engage Extension and nonExtension evaluators, researchers, communicators, economists, and statasticians
- Tie regional common program measures to public value

The South as PV Champion

- Require funding proposals to measure and articulate the public value of the project (i.e. NSF broader impacts)
- Hire public value specialists (i.e. United Way)
- Engage and support volunteers and other stakeholders to measure and articulate Extension's public value (i.e. Virginia Master Gardeners)
- Move from a focus on service, content, transmission, and facilitation to transformative learning that results in public value
- Create and use Extension scholarship to increase academic value

Closing Thoughts

- Focusing on Extension public value can help reorient Extension as a valuable public good
- Extension is situated to articulate public value locally, regionally, and at the state and national levels but intentional and strategic support is required
- The South has led impactful national initiatives in the past – you are now called to be the champion for Extension's public value movement nationally as the new normal

Statewide Economic Assessment

2014

EXTENSION.TENNESSEE.EDU

JOSEPH L. DONALDSON, PH.D.

Advancing Tennessee

UT Extension Programs Produce Substantial Economic Impact

Assessment Overview

UT Extension extends the knowledge and expertise of the University to the people of Tennessee through agents and specialists in all 95 counties of the state. Educational programs in 4-H youth development, agriculture and natural resources, family and consumer sciences, and community economic development produce substantial returns to the state. Using research, questionnaires, observations, and sales records, an economic impact was estimated at more than $493 million for 2014 for statewide educational programs.

Economic assessments provide a tangible way to measure and monitor the results of Extension programs. Economic impact data, such as jobs created or maintained, communicates the value of Extension programs in a way that most people understand.

The 2014 statewide economic assessment was shared with county directors, regional directors, program leaders, area 4-H specialists, department heads, and camp managers on February 16, 2015.

Introductory Statement

We provide education that produces solutions to societal, economic and environmental issues. We teach Tennesseans in the places they live, work, and play through hundreds of programs. Our efforts are based on local needs, research, and a commitment to improve the quality of life.

Economic Impact

The total economic impact of Extension's statewide educational efforts in 2014 was estimated at $493 million. This includes recurring economic values (increased revenue, increased savings, and one-time capital purchases) and one-time non-recurring economic values.

Jobs Created/Maintained

The recurring economic impacts translate to 5,930 jobs created or maintained.

Cost-Benefit

For every $1 in public funds invested in UT Extension programs, an estimated $8.13 is returned to the people of Tennessee.

Big Idea 1

Economic impact data communicates the *public value* of Extension programs in a way that most people understand.

Big Idea 2

SUPER has made statewide economic assessments possible. Data is incorporated from all 95 counties, regions, and departments. The data represents research, questionnaires, observations, and sales records.

Making the Most of Economic Assessment

Engage the Workforce

Spring is a great time to share the economic assessment with your colleagues to influence both reporting in the current year and program planning in subsequent years.

Compare Cost-Benefit Analysis

County offices may compare the statewide assessment to data for their own county. SUPER makes this easy. A *Unit Cost-Benefit Analysis* is located in Unit Operations.

Report Accurately

The *Unit Cost-Benefit Analysis* is fed by the following SUPER reporting:

- volunteer hours reported in Delivery activity reports
- financial outcomes reported in Delivery outcomes
- value of local contributions to planned programs reported in Individual Annual Plans
- course/event fees collected reported in Training/Registration
- grants/contracts/gifts reported in Profile

Share the Assessment

Accountability reports are helpful in communicating the value of Extension to industry leaders, advisory groups, legislators, county commissioners, and other stakeholders. Consider sharing the economic assessment with a one-page accountability report of program outcomes from your county or area served.

Do the Best You Can

The recurring economic impacts only represent about 16 programs. Neere, Vortruba, and Wells (2011) stipulated that "...it is often difficult – perhaps even impossible – to do a comprehensive assessment or evaluation. In that case, the institution should do the best it can..." (p.177)

Big Idea 3

Economic impact is just one way to communicate the value of Extension programs. Other measures may demonstrate an increased quality of life or better environmental conditions.

Resources

The following resources are helpful for extending knowledge of economic impact, public value, and engagement:

Franz, N. (2011). Advancing the public value movement: Sustaining Extension during tough times. *Journal of Extension* (49), 2. Available: http://www.joe.org/joe/2011april/comm2.php

Kalambokidis, L. (2004). Identifying the public value in extension programs. *Journal of Extension* (42), 2. Available: http://www.joe.org/joe/2004april/a1.php

Neere, C.A., Votruba, J.C. & Wells, G.W. (2011). *Becoming an engaged campus: A practical guide for institutionalizing public engagement*. San Francisco: Jossey-Bass.

O'Neill, N. (2008). Calculating the economic impact of health education programs: Five tools for Extension educators. *Journal of Extension* (46), 1. Available: http://www.joe.org/joe/2008february/tt4.php

State & National Stakeholders

The Economic Assessment is used in a number of ways with state and national stakeholders, including:

A. *Defining the Future, the UT System Strategic Plan* includes our economic assessment data: http://president.tennessee.edu/strategicplan/dashboard/index.html
B. *The Tennessee State Budget* is a performance-based document that includes actual performance and estimated performance on key outcomes (called standards and measures) for every state agency. See 2015-2016 State Budget at: http://www.tn.gov/assets/entities/finance/budget/attachments/2016BudgetDocumentVol1.pdf http://www.tn.gov/finance/bud
C. *Congressional Reports* to Tennessee's congressional delegation: https://ag.tennessee.edu/eesd/Pages/ReportsPlans.aspx
D. *USDA-NIFA* requests that every Annual Accomplishment Report include statewide economic assessment.

Statewide Economic Assessment

FY 2014

UT Extension extends the knowledge and expertise of the University to the people of Tennessee through agents and specialists in all 95 counties of the state. Educational programs in 4-H youth development, agriculture and natural resources, family and consumer sciences, and community economic development produce substantial returns to the state. Using research, questionnaires, observations, and sales records, an economic impact was estimated at ***more than $493 million*** from July 1, 2013 through June 30, 2014 for statewide educational programs.

Recurring Economic Impacts – $296.4 million – 5,930 jobs created or maintained

Recurring economic values (increased revenue, increased savings, and one-time capital purchases) for up to two years after program

Crop Variety Trials, Pest Control, Irrigation, Marketing, and Precision Agriculture
UT Extension crop variety testing data is used extensively by 80% of Tennessee farmers to select the seed that they use to plant their oilseed, grain and cotton crops. Results from the variety testing program have helped farmers increase yields by identifying the varieties that will perform best in their farming operations. In 2014, the higher yields resulted in approximately $102.4 million in additional income to Tennessee farmers. Again this year, farmers increased the number of irrigated acres used for corn, cotton, and soybean production. Based on UT research, average yield increases from irrigation resulted in an additional $18.3 million in farm income. Based on an average cost of $900 per acre, Tennessee row crop producers invested more than $59 million in their local economy by purchasing center pivot irrigation equipment. Row crop producers increased returns by $2.6 million on 94,100 acres by using forward pricing market opportunities as compared to selling at harvest. By using no-till production as a best management practice, it is estimated that production costs were reduced by more than $18 million.

Pesticide Safety Education Program and Urban Integrated Pest Management
The Pesticide Safety Education Program had 1041 certifications and 5459 re-certifications; research has estimated annual benefits of $38 million. Additionally, UT Extension taught more than 2,800 pest management professionals how to effectively manage pests found in and around structures, saving an estimated $1.4 million to the pest management industry.

Forage Systems
UT Extension educated farmers on the benefits of warm-season grasses, clover, and stockpiling tall fescue. Extension also demonstrated hay storage, feeding methods to reduce waste and spoilage, and broadleaf weed control. Tennessee farmers saved more than $12.2 million from better forage production, including following fertilizer recommendations, storage, and feeding practices.

Agritourism and Community Economic Development
Tennessee agritourism operators look to Extension for education regarding budgeting, safety, customer service, technical assistance, and more. A recent survey of 200 agritourism operators showed that as a result of Extension programs, sales increased by a combined $7.5 million. Other Extension community economic development programs produced an estimated $1.3 million in increased revenue and capital purchases; examples included assisting local charities to obtain grant funds and providing assistance to small businesses.

4-H Centers
UT Extension's 4-H program is the largest youth development program in the state, serving more than 320,000 participants each year. UT Extension operates three 4-H Centers across the state, providing summer camping and year-round educational experiences. The 4-H Centers are funded by user fees and provide an economic impact to the communities where they are located by employing staff and purchasing equipment, food, and supplies with a local annual impact of more than $2 million per location.

Turfgrass Weed Management
UT Extension's turfgrass education program focused on technical assistance and education to economically control weeds, and the estimated savings to Tennesseans managing golf courses, sod farms, and athletic fields was $10 million.

Saving Our Bees
In 2014, 120 Tennesseans completed the UT Extension Beemaster program. These beekeepers learned how to save honeybee colonies from various catastrophes, including parasitic mites, with an estimated 10,500 bee colonies saved (valued at $700 per hive for bees, hive parts, medications, and honey production). The total value of the saved colonies, hive parts, and honey production is valued at $7.3 million.

Optimizing Nursery, Fruit, and Vegetable Production
Tennessee nursery growers depend on UT Extension's educational programs and plant, pest and soil diagnostic services to produce and market healthy crops. Likewise, the state's fruit and vegetable growers depend on Extension agents and specialists regarding variety selection, management, and marketing. The state's ornamental, fruit, and vegetable producers realized more than $1.1 million in increased revenue or savings as a result of UT Extension recommendations.

Optimizing Animal Production
Extension agents emphasized quality assurance, reproductive management, nutrition, and marketing with Tennessee beef producers 2014, increasing returns by $10 million. Tennessee horse owners depend on UT Extension's research-based programs for horse health and nutrition. UT Extension taught rotational grazing to increase forage production, vaccinations, dental care, and correct deworming practices. These practices helped 205 horse owners, owning more than 1,000 horses, to save a combined $1.3 million.

One-Time Economic Impacts – $196.6 million

One-time non-recurring economic values

Nutrition Education
Family and Consumer Sciences nutrition education programs reach approximately two million Tennesseans annually through group meetings, worksite sessions, television, and radio programs. Nutrition education studies have found cost/benefit ratio of $1.00/$10.64. This translates to a return of over $100.7 million for the investment in UT Extension's nutrition education programs for the state of Tennessee.

Health Literacy
Increasing health literacy and adopting healthy habits such as increasing exercise and participating in health screenings have shown to improve health and reduce the risk of many chronic diseases. For every dollar spent on UT Extension Family and Consumer Sciences health education programs, $25 is saved on direct medical costs and indirect expenditures, resulting in a $64.8 million benefit to Tennessee.

Tennessee Saves
The Tennessee Saves program instructs Tennesseans in sound financial practices, encourages them to build assets, and encourages them to reduce dependence on credit and discharge debt. In 2014, the estimated economic impact of clientele's saving and the debt reduction was $26.2 million.

Volunteerism
UT Extension agents and specialists managed volunteers for various programs and services. Volunteers extended the education offered by paid staff and contacted over 800,000 additional Tennesseans through their service. Using the Independent Sector's dollar value of a volunteer hour in Tennessee ($20.13/hour), the value of the 244,095 volunteer hours served was $4.9 million.

Cost-Benefit Analysis – $1 to $8.13

For every $1 in public funds invested in UT Extension programs, an estimated $8.13 is returned to the people of Tennessee.

Prepared by Joseph L. Donaldson, Ph.D.

Real. Life. Solutions.

Advancing Tennessee

Statewide Economic Assessment Protocol

We are measuring the extent that UT Extension programs annually contribute to economic activity in the state of Tennessee. Our assessment focuses on UT Extension effectiveness for increasing revenue, increasing savings, and making investments in plant or equipment for farms, small businesses, communities, families and individuals. Nearly 3,000 stakeholders participated in the 2010 UT Extension strategic planning effort, and they told us that economic measures were one of the most important criteria for evaluating Extension programs (Donaldson & Hastings, 2010).

Recurring Economic Impacts

Recurring economic values (increased revenue, increased savings, and one-time capital purchases) for up to two years after program:

1. ***Evaluation Studies by Extension Specialists***
   Review SUPER impact statements for evaluation studies by Extension specialists. Sum the recurring economic values from these studies.

2. ***SUPER Outcomes***
   Review SUPER statewide outcomes. Programs currently being monitored for recurring economic impacts include: row crops pest control, row crops irrigation, forage systems, beef systems, nursery production, fruit and vegetable production, horse health, and community leadership.

3. ***Jobs Created and/or Maintained***
   The sum (1+2) is the total estimate of recurring economic impacts. Divide the sum by $50,000. The result is the total number of jobs created and/or maintained using the U.S. Department of Defense estimates (University of Tennessee Institute for Public Service, 2006).

One-Time Economic Impacts

One-time non-recurring economic values

4. ***SUPER Outcomes***
   Review SUPER statewide outcomes. Programs currently being monitored for one-time (non-recurring) economic values include: family economics, beef marketing, 4-H scholarships, and farm financial planning.

5. ***Volunteerism***
   Use SUPER Activity Report for total volunteer hours contributed to UT Extension programs. Multiply the total hours by the Independent Sector's dollar value of a volunteer hour in Tennessee, $20.72 (Independent Sector, 2015).

6. ***Nutrition Education***
   Obtain the total amount of funds invested by UT Extension in nutrition education programs from USDA-NIFA Annual Report calculations. Multiply this amount by $10.64. Nutrition education studies have found cost/benefit ratio of $1.00/$10.64 (Lewis, 1998; Wessman, Betterley & Jensen, 2002).

7. ***Health Literacy***
   Obtain the total amount of funds invested by UT Extension in health literacy programs from USDA-NIFA Annual Report calculations. Multiply the amount by $25. Research has shown that for every dollar spent on health literacy programs, $25 is saved on direct medical costs and indirect expenditures.

8. ***Total Economic Impact***
   Sum the one-time economic impacts (4+5+6+7). Add the one-time and recurring economic impacts for the total, estimated economic impact that results from UT Extension programs.

Cost-Benefit Analysis

A cost-benefit analysis is completed using the total economic impact (benefits) and the total Extension expenditures for the fiscal year (cost of investment). Return on investment is calculated as follows:

$$\frac{\textit{(Benefits – Cost of Investment)}}{\textit{Cost of Investment}}$$

References

Donaldson, J.L. & Hastings, S. (2010). Extension stakeholder survey for strategic planning. Available: https://utextension.tennessee.edu/strategicplanning/Pages/Updates.aspx

Independent Sector (2015). *Value of volunteer time.* Available: http://www.independentsector.org/volunteer_time

Lewis, E.C. (1998). Cost benefit analysis of Virginia EFNEP: Calculating indirect benefits and sensitivity analysis. Unpublished master's thesis. Blacksburg: Virginia Polytechnic Institute and State University.

University of Tennessee (2006). Institute for Public Service. Available:http://www.ips.tennessee.edu/

Wessman, C., Betterley, C., Jensen, H. (2002). An evaluation of the costs and benefits of Iowa's Expanded Food and Nutrition Education Program. Ames: Iowa State University Extension.

Prepared by Joseph L. Donaldson
August 2015

Performance Measures Information Form

1. Name of department/commission/agency being reviewed

   University of Tennessee

2. Name of program

   332.26 UT Agricultural Extension Service

3. Performance standard

   UT Extension will increase the economic value of its programs annually.

4. Performance measure

   Economic value of program delivery.

5. Describe, so someone unfamiliar with the program can understand, what you are trying to measure and why it is important to the operation of your program.

   We are measuring the extent that UT Extension programs contribute to increased economic activity in the state of Tennessee. Our measure focuses on increasing revenue and savings for farms, small businesses, families, and individuals. UT Extension extends the knowledge and expertise of the University to the people of Tennessee through agents and specialists in all 95 counties of the state. Educational programs in 4-H youth development, agriculture and natural resources, family and consumer sciences, and resource development produce substantial economic returns to the state.

6. Which aspect of the program are you measuring?

   ☐Inputs ☐Outputs ☒Outcomes ☐Efficiency ☐Quality

7. Who collects the data used in this measure, how is the data collected (e.g., what types of information systems are used), and how often is the data collected? List the specific sources (e.g., report, other document, database) of the raw data for the performance measure.

   The data is collected by UT Extension personnel using the System for University Planning, Evaluation, and Reporting (SUPER). SUPER is a custom-built, online software available 24 hours per day, 365 days per year. Personnel are required to report program outputs (number of meetings, number of clients served, etc.) on a monthly basis, at minimum. Personnel are required to report program outcomes (including economic development) on an annual basis, at minimum. SUPER includes a set of program outcomes for measuring our programs using economic, quality of life, and environmental standards. All of the raw data is stored in SUPER.

8. How is the Actual performance measure result calculated? If a specific mathematical formula is used, provide it. If possible, provide the calculations and supporting documentation detailing your process for arriving at the Actual performance measure – FY 2011-12 $537 million.

   The actual performance measure is an estimate, based on research, questionnaires, observations and sales records. The performance measure is calculated by summing the value of increased revenue, increased savings, and investment in plant and equipment as a result of UT Extension educational programs, technical or professional assistance.

9. Is the Actual performance measure result reported really an actual number, or an estimate? If an estimate, explain why it was necessary to use an estimate. If an estimate, is the performance measure result recalculated, revised, and formally reported once the data for an "actual" calculation is available?

   The Actual Performance Measure is an estimate. It is necessary to use an estimate due to the nature of the programs. The estimates that we use are based on program evaluation results (such as the results of

participants' questionnaires) and/or research results. It is not feasible to capture actual amounts for all programs.

10. In addition to Actual performance measure results, you also developed Estimate and Target results/amounts for future years. How did you arrive at those numbers? For example, what factors did you consider in determining whether the numbers should increase or decrease, and by how much?

    The original Estimate and Target amounts were developed in FY 2006. The total economic impact increased from FY 2005 to FY 2006 by $1.5 million. The estimate of a $10 million annual increase in econmic impact was aspirational. We have exceeded the target every year since FY 2005 except for FY 2012 when the total impact decreased by $5.3 million from the previous year. This decrease was consistent with a decrease in state funds. In FY 2012, state appropriations were reduced across the board for all public agencies. For UT Extension, this was a $2.5 million reduction in operating expenditures.

11. Who in your agency reviews the performance measure and associated data/calculations? Describe any processes to verify that the measure and calculations are appropriate and accurate.

    All documentation in SUPER is reviewed annually as part of the individual performamce apprasial process. The data an individual reports in SUPER appears automatically on UT Extension appraisal forms within SUPER. This ensures that all data is checked by an immediate supervisor. The data is also checked by Regional Extension Directors and Department Heads. Also, a thorough review of all data is completed by Dr. Joseph Donaldson, Extension Specialist for Program Development and Evaluation. After any corrections are made in individual reports, Dr. Donaldson makes all calculations, and submits the Statewide Economic Assessment and raw data to State Program Leaders and the Dean of UT Extension for their review. An important feature of this process is both face-to-face and online training (conducted annually) to teach consistent reporting to all UT Extension employees. This entire process assures that the data reported is appropriate and accurate.

12. Are there written procedures related to collecting the data or calculating and reviewing/verifying the performance measure? Provide copies of any procedures.

    Yes, please see the attached copy.

13. Describe any concerns about your agency's performance measures and any changes or improvements you think need to be made in the process. Also note if any changes to the performance measures are planned for the upcoming *Budget* or *Agency Strategic Plans*.

    The UT Extension Statewide Economic Assessment has been well-received by our Statewide Advisory Council, composed of agricultural, business, community, government, and industry leaders. Our Federal partner, the United States Department of Agriculture National Institute of Food and Agriculture, has indicated approval for the economic assessment. Various elected officials have expressed their approval for estimating Extension performance using economic measures. In 2012, we conducted a long-range strategic planning process with nearly 3,000 Tennesseans. They told us that economic measures, including cost-benefit analyses, were one of the preferred ways for evaluating Extension programs. For these reasons, we propose to continue our current performance measure and protocols for the foreseeable future.

14. List contact person for follow up/additional questions (name, telephone number, e-mail address).

    - Dr. Joseph L. Donaldson, Extension Specialist, Program Development and Evaluation, 865-974-7245, jldonaldson@tennessee.edu
    - Dr. Tim L. Cross, Dean and Professor, UT Extension, 865-974-7114, tlcross@tennessee.edu
    - Dr. Robert Burns, Assistant Dean and Professor, Agriculture, Natural Resources, and Resource Development, 865-974-7112, rburns@tennessee.edu
    - Dr. Shirley Hastings, Associate Dean & Professor, Family and Consumer Sciences, 865-974-7384, hastings@tennessee.edu
    - Mr. Steve Sutton, Director, 4-H Youth Development, 865-974-2128, ssutton2@tennessee.edu

CERTIFICATION OF PESTICIDE APPLICATORS RULE

COMPARISON OF THE MAJOR NEW PROPOSED PROTECTIONS TO THE EXISTING PROTECTIONS

PROPOSED RULE	CURRENT RULE
Certified Applicators	
Strengthen competency standards for private applicators to cover content necessary for safe application of RUPs, similar to commercial applicator core competency plus agricultural pest control	Private applicator competency standards cover 5 general topics
Establish certification categories for certain application methods (soil fumigation, non-soil fumigation, aerial application) for private and commercial applicators	Private applicators: no categories of certification Commercial applicators: no additional certification to use certain application methods
Establish a mandatory 3-year certification period for private and commercial applicators and minimum requirements for recertification programs (continuing education or retest)	No federal requirements for recertification (timeframe or content)
Eliminate special process to allow non-readers to be certified as private applicators	Non-readers can be certified to use restricted use pesticides under a special process administered by the State
Noncertified Applicators Working Under the Direct Supervision of Certified Applicators	
Require pesticide safety training for noncertified applicators using RUPs similar to the training for handlers under the Worker Protection Standard (safety, proper pesticide application techniques, responding to spills, protecting oneself, others and the environment) Exemption from the training requirement for those with valid WPS training and those who have passed the commercial core exam	No requirement for instruction in safety, proper pesticide application techniques, responding to spills, protecting oneself, others and the environment
Require the supervising applicator to **provide specific instructions** related to application and ensure that the noncertified applicator has a copy of the labeling at the time of application	Supervising applicator must provide general guidance on applying a specific pesticide
Require supervising certified applicator to provide means for **immediate communication** with noncertified applicator	Supervising applicator must provide noncertified applicator with instructions on how to contact the supervisor in the event he or she is needed
Minimum Age	
Require all persons using restricted use pesticides to be **at least 18 years old** (private applicators, commercial applicators, noncertified applicators)	No minimum age to use restricted use pesticides
Program Administration	
Require candidates for certification and recertification to **present identification**	No identification required for persons seeking certification to apply restricted use pesticides
Require certification exams to be **closed book and proctored**	Certification exams must be written

Require dealers of restricted use pesticides to **maintain records of sales**	No requirement for dealers of restricted use pesticides to maintain records
Require specific information on the credential (license) issued to a certified applicator	No federal requirements for what information must be included on documents used to verify an applicator's certification status

Proposed Revisions: EPA Certification of Pesticide Applicator Rule (40 CFR 171)

Item	Proposed Revision	Existing Rule
Private Applicator Competency		
Enhance Private Applicator Competency Standards Unit VI.A.	Private applicators must demonstrate competency in the general core competency standards similar to those for commercial applicators (i.e., **label and labeling comprehension; safety; environment; pests; pesticides; equipment; application techniques; laws and regulations; responsibilities for supervisors of noncertified applicators; stewardship) along with general knowledge of agricultural pest control.**	Private applicators must be certified as competent on 5 general topics: recognizing pests, reading and understanding labeling, applying pesticides in accordance with the labeling, recognizing environmental conditions and avoiding contamination, recognizing poisoning symptoms and procedures to follow in the case of a pesticide accident.
Strengthen Private Applicator Competency Gauge Unit VI.B.	Private applicators must either **attend a training program covering the mandatory competency standards** (Unit VI.A.) **or pass a written exam.**	Private applicator certification can be done by written or oral exam, or other method approved as part of the State certification plan.
Eliminate Non-Reader Certification for Private Applicators Unit VI.C.	No "non-reader" option for persons who cannot read to obtain certification to use specific RUPs.	States can offer an alternative, product-specific certification process for persons who cannot read.
Categories for Private and Commercial Applicators		
Establish Application Method-Specific Categories for Private and Commercial Applicator Certification Unit VII.	Establish categories for private and commercial applicators performing**: aerial application, soil fumigation, and non-soil fumigation.**	No additional certification required to use certain application methods that may present higher risks if not conducted properly.

Item	Proposed Revision	Existing Rule
Establish Predator Control Categories for Private and Commercial Applicator Certification Unit VIII.	Add categories for private and commercial applicators: **sodium fluoroacetate in livestock protection collars and sodium cyanide delivered through M-44 devices.**	No predator control categories established in rule. Registration decisions and labeling for sodium fluoroacetate (Compound 1080) used in livestock protection collars and sodium cyanide delivered through M-44 devices include specific competency standards and require applicators to be competent.
Exam and Training Security Requirements		
Security and Effectiveness of Exam and Training Administration Unit IX.	Require candidates to **present identification** for initial and recertification exams and training sessions. Codify policy requiring **all exams to be closed book and proctored.**	No requirement to present identification at exam or training sessions. Competency for commercial applicators must be determined on the basis of written examination. EPA policy requires that all certification exams be closed book and proctored.
Strengthen Standards for Noncertified Applicators Working Under the Direct Supervision of Certified Applicators		
Enhance Competence of Noncertified Applicators Unit X.A.	Noncertified applicators must receive **annual training on safe pesticide application and protecting themselves and others from pesticide exposure** (similar to WPS handler training). Exemption from training requirement for those with valid WPS handler training and those who have passed the commercial core exam.	Noncertified applicators must be competent to use RUPs. No specific training requirements. For specific applications, the certified applicator must provide verifiable instructions including detailed guidance for applying the pesticide.
Establish Qualifications for Training Providers Unit X.B.	Noncertified applicator training can only be provided by one of the following: **a currently certified applicator, a State-designated trainer of certified applicators, or a person who has completed a train-the-trainer course under the WPS.**	The certified applicator provides required instructions. No qualifications required other than certification.

Item	Proposed Revision	Existing Rule
Establish Qualifications for Certified Applicators Supervising Noncertified Applicators Unit X.C.	Supervising applicators must: • Be certified in the category in which they supervise applications. • **Ensure noncertified applicators under their supervision have satisfied the training requirement.** • For specific applications, **provide a copy of all applicable labeling to the noncertified applicator** and provide specific instructions related to the application. • Ensure **means for immediate communication** between the supervisor and supervisee are immediately available.	Supervising applicators must demonstrate practical knowledge of supervisory requirements. For specific applications, supervising applicator must provide detailed guidance for applying the pesticide properly and provisions for contacting the certified applicator.
Expand Commercial Applicator Recordkeeping to Include Noncertified Applicator Training Unit XI.	Require **commercial applicators to maintain records of noncertified applicators' training** that include: the trained noncertified applicator's printed name and signature, the date of the training, the name of the person who provided the training, and the supervising commercial applicator's name.	No commercial applicator recordkeeping required related to providing verifiable instructions to noncertified applicators.
Minimum Age for Certified and Noncertified Applicators		
Establish a Minimum Age for Certified Applicators Unit XII.	Persons must be at least **18 years old** to be certified as a commercial or private applicator.	No minimum age requirement.
Establish a Minimum Age for Noncertified Applicators Unit XIII.	Persons must be at least **18 years old** to qualify as a noncertified applicator using RUPs under the direct supervision of a commercial or private applicator.	No minimum age requirement.
National Certification Period and Standards for Recertification		
National Certification Period Unit XIV.A.	Require all applicators to renew their certification (recertify) at least **every 3 years**.	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides safety and properly.

Item	Proposed Revision	Existing Rule
Recertification Requirements Unit XIV.B.	**One continuing education unit (CEU) is 50 minutes of active training time.** To renew their certification, **commercial applicators** must earn **6 CEUs covering core content and 6 CEUs per category of certification**, or they must pass written exams for core and each category of certification. To renew their certification, **private applicators** must earn **6 CEUs covering the general private applicator certification requirements and 3 CEUs per category of certification**, or they must pass written exams for general private applicator certification and each category of certification. Applicators must earn at least half of the required CEUs in the 18 months preceding the expiration of their certification.	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides safety and properly.
Revise State Certification Plan Requirements		
State Plan Modification to Implement Proposed Changes Unit XV.3.i.	Certification plans must meet or exceed new standards and requirements. States, tribes, and territories may either **adopt the proposed standards for noncertified applicator training or prohibit the use of RUPs by noncertified applicators working under the direct supervision of certified applicators.**	Certification plans must meet or exceed existing standards and requirements.

Proposed Revisions: EPA Certification of Pesticide Applicator Rule (40 CFR 171)

Item	Proposed Revision	Existing Rule
Program Reporting and Accountability Unit XV.3.ii.	**Reporting must include:** • For private and commercial applicators - new, recertified, and total number of applicators holding certifications, **by category and subcategory** (if applicable). • Any changes to the certification plan not previously evaluated by EPA. • Any planned changes to the certification plan. • **Number, description and narrative discussion of enforcement actions taken for incidents involving RUPs.**	Reporting must include: • Total number of applicators, private and commercial, by category, currently certified; and number of applicators, private and commercial, by category, certified during the last reporting period. • Any changes in commercial applicator subcategories. • A summary of enforcement activities related to use of restricted use pesticides during the last reporting period. • Any significant proposed changes in required standards of competency. • Proposed changes in plans and procedures for enforcement activities related to use of restricted use pesticides for the next reporting period. • Any other proposed changes from the State plan that would significantly affect the State certification program.
Civil and Criminal Penalty Authority Unit XV.3.iii.	States must have authority to assess civil **and** criminal penalties for commercial and private applicators.	States must have authority to assess civil and/or criminal penalties for commercial and private applicators.
Commercial Applicator Recordkeeping Unit XV.3.iv.	States must require commercial applicators to maintain **records about RUP use including:** • **Name and address of person for whom RUP applied** • **Location of application** • **Size of area treated** • **Site to which RUP was applied** • **Time and date of application** • **Product name and EPA registration number of RUP applied** • **Total amount of RUP applied per application and location** • **Name and certification number of certified applicator and name(s) of any noncertified applicator that made the application under the direct supervision of the certified applicator.** States must require commercial applicators to maintain **records related to the qualifications of noncertified applicators working under their direct supervision.**	State plans must include requirements for certified commercial applicators maintain for at least 2 years routine operational records containing information on kinds, amounts, uses, dates, and places of application of RUPs.

Proposed Revisions: EPA Certification of Pesticide Applicator Rule (40 CFR 171)

Item	Proposed Revision	Existing Rule
RUP Dealer Recordkeeping Unit XV.3.v.	**RUP dealer recordkeeping must include:** • Name and address of each person to whom the RUP was distributed or sold. • The applicator's certification number, issuing authority, certification expiration date, and categories of certification. • The product name and EPA registration number of the RUP(s) distributed or sold in the transaction, and the State special local need registration number on the label of the RUP if applicable. • The quantity of the pesticide(s) distributed or sold in the transaction. • The date of the transaction.	No federal requirement for RUP dealers to maintain records.
Certified Applicator Credentials Unit XV.3.vi.	**Certified applicator credentials must include:** • The full name of the certified applicator. • The certification, license, or credential number of the certified applicator. • The type of certification (private or commercial). • The category(ies), including any application method-specific category(ies) and subcategories of certification, in which the applicator is certified, as applicable. • The expiration date of the certification. • A Statement that the certification is based on a certification issued by another State, Tribe or Federal agency, if applicable, and the identity of that State, Tribe or Federal agency.	No federal requirements for what information must be included on documents used to verify an applicator's certification.
Reciprocal Applicator Certification Unit XV.3.vii.	Certification plans must specify **whether, and if so under what circumstances, the state would issue reciprocal certifications.** Reciprocal certifications subject to specific conditions.	No requirements for states to provide specific information on requirements and procedures for issuing reciprocal certification.

Proposed Revisions: EPA Certification of Pesticide Applicator Rule (40 CFR 171)

Item	Proposed Revision	Existing Rule
State Plan Maintenance, Modification, and Withdrawal Unit XV.3.viii.	**Codify policy that substantial modifications** include: • Deletion of a mechanism for certification and/or recertification. • Establishment of a new private applicator subcategory, commercial applicator category, or commercial applicator subcategory. • Any other changes that the Agency has notified the State, Tribal or Federal agency that the Agency considers to be are substantial modifications.	States may not make substantial modifications to their certification plan without EPA approval. The regulation does not outline what constitutes a substantial modification. EPA policy states that substantial modifications include: • Deletion of a mechanism for certification and/or recertification. • Establishment of a new private applicator subcategory, commercial applicator category, or commercial applicator subcategory. • Any other changes that the Agency has notified the State, Tribal or Federal agency that the Agency considers to be are substantial modifications.
Federal Agency Certification Plans		
Establish Provisions for Review and Approval of Federal Agency Plans Unit XVI.A.	Delete Government Agency Plan option from the regulation. **Codify existing policy** to allow Federal agencies to develop their own plans for certifying applicators. **Federal agency certification plans must meet or exceed the standards in the proposed regulation.**	Option to develop a single, federal government-wide Government Agency Plan to certify federal employees applying RUPs. *Government Agency Plan never developed.* EPA policy allows Federal agencies to develop their own plans for certifying applicators, as long as the plan meets or exceeds the applicable standards in the regulation for State plans, and complies with requirements of the policy.

Item	Proposed Revision	Existing Rule
Certification in Indian Country		
Clarify Options for Establishing a Certification Program in Indian Country Unit XVII.	**Three options for applicator certification programs in Indian Country:** • Tribes may **enter into an agreement with EPA** to recognize certifications issued other EPA-approved certification plans (State, Tribal, or Federal); no concurrence from or agreement with State is needed • Tribes may **develop and implement a Tribal certification plan** (requires Tribes to develop and submit a Tribal certification plan that meets or exceeds the proposed standards) • EPA may **administer a Federal certification plan for applicators in Indian country** that meets or exceeds the proposed standards. EPA may include multiple tribes and geographic areas under a single plan.	Three options for applicator certification programs in Indian Country: • Tribes may **utilize State certification** to certify applicators (requires concurrence by the State(s) and an appropriate State-Tribal cooperative agreement) • Tribes may **develop and implement a Tribal certification plan** (requires Tribes to develop and submit an appropriate Tribal certification plan to EPA for approval) • EPA may **administer a Federal certification plan for applicators in Indian country**
EPA-Administered Plans		
Revise Provisions for EPA-Administered Plans Unit XVIII.	EPA-administered federal certification plans must meet the proposed standards for State certification plans, including RUP applicator certification, recertification, and noncertified applicator qualifications, as well as plan reporting and maintenance requirements.	The current rule establishes requirements for EPA-administered certification in States or areas of Indian country without EPA-approved certification plans in place, including specific standards for certification and recertification of pesticide applicators.
Definitions – Unit XIX.A.– (R)evised or (N)ew		
Application (N)	The dispersal of a pesticide on, in, at, or around a target site.	
Application method (N)	The application using a particular type of equipment, mechanism, or device used in the application of a pesticide, including, but not limited to, ground boom, air-blast sprayer, wand, and backpack sprayer, as well as methods such as aerial, chemigation, and fumigation.	
Compatibility (R)	The extent to which a pesticide can be combined with other chemicals without causing undesirable results.	
Dealership (R)	Any establishment owned or operated by a restricted use pesticide retail dealer where restricted use pesticides are distributed or sold.	
Fumigant (N)	Any pesticide product that is a vapor or gas, or forms a vapor or gas upon application, and whose pesticidal action is achieved through the gaseous or vapor state.	
Fumigation (N)	Application of a fumigant.	

Proposed Revisions: EPA Certification of Pesticide Applicator Rule (40 CFR 171)

Item	Proposed Revision	Existing Rule
Indian country (N)	(1) All land within the limits of any Indian reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and, including rights-of-way running through the reservation. (2) All dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State. (3) All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.	
Indian Tribe (N)	Any Indian or Alaska Native Tribe, band, nation, pueblo, village, or community included in the list of Tribes published by the Secretary of the Interior pursuant to the Federally Recognized Indian Tribe List Act.	
Non-target organism (R)	Any plant, animal or other organism other than the target pests which a pesticide is intended to affect.	
Noncertified applicator (N)	Any person who is not certified in accordance with 40 CFR 171 to use or supervise the use of restricted use pesticides in the pertinent jurisdiction, but who is using restricted use pesticides under the direct supervision of a person certified as a commercial or private applicator certified in accordance with this part.	
Personal protective equipment (N)	Devices and apparel that are worn to protect the body from contact with pesticides or pesticide residues, including, but not limited to, coveralls, chemical-resistant suits, chemical-resistant gloves, chemical-resistant footwear, respirators, chemical-resistant aprons, chemical-resistant headgear, and protective eyewear.	
Principal place of business (R)	The principal location, either residence or office, where a person conducts a business of applying restricted use pesticides. A person who applies restricted use pesticides in more than one State or area of Indian country may designate a location within a State or area of Indian country as its principal place of business for that State or area of Indian country.	
Toxicity (R)	The property of a pesticide that refers to the degree to which the pesticide and its related derivative compounds are able to cause an adverse physiological effect on an organism as a result of exposure.	
Use (N)	(1) Pre-application activities, including, but not limited to: (i) Arranging for the application of the pesticide. (ii) Mixing and loading the pesticide. (iii) Making necessary preparations for the application of the pesticide, including responsibilities related to providing training, a copy of a label and use-specific instructions to noncertified applicators, and complying with any applicable requirements under part 170 of this chapter. (2) Applying the pesticide, including supervising the use of a pesticide by a noncertified applicator. (3) Post-application activities, including, but not limited to, transporting or storing pesticide containers that have been opened, cleaning equipment, and disposing of excess pesticides, spray mix, equipment wash waters, pesticide containers, and other materials contaminated with or containing pesticides.	
Use-specific instructions (N)	The information and requirements specific to a particular pesticide product or work site that are necessary in order for an applicator to use the pesticide in accordance with applicable requirements and without causing unreasonable adverse effects.	

EPA Proposed Rule	EPA Current Rule	Oklahoma Current Rule
Certified Applicators		
Strengthen Competency standards for private applicators to cover content necessary for safe application of RUPs	Private applicator standards cover 5 general comments	Private applicator standards cover core requirements
Establish certification categories for soil fumigation, non-soil fumigation, aerial for private and commercial applicators	No categories	All categories established We will need to split soil & non-soil.
Eliminate special process to allow non-readers to be certified as private applicators	Non-readers can be certified to use RUPs under a special process administered by the state	ODAFF complies with ADA
Private applicators must either attend a training program covering the mandatory competency standards or pass a written exam.	Private applicator certification can be done by written or oral exam, or other method approved as part of the State certification plan.	Private applicators are required to take an open book take home test.
Add categories for private and commercial applicators: sodium fluoroacetate in livestock protection collars and sodium cyanide delivered through M-44 devices	No predator control categories established in rule.	OK has a predatory animal category that covers sodium fluoroacetate and M-44.
Persons must be at least 18 to apply RUP both private and commercial, certified or non-certified	No minimum age	Refer to Department of Labor
Require all applicators recertify at least every 3 years	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides properly and safely	5 year recertification period
One CEU unit will be 50 min	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides properly and safely	One CEU unit will be 50 min
To renew certification, commercial applicators must earn 6 CEUs covering core content and 6CEUs per category of certification, or they must pass written exams for core and each category of certification	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides properly and safely	To renew certification, commercial applicators must earn CEUs covering core **or** category content (See table 1 for list of required CEUs for each category), or they must pass written exams for each category of certification

To renew certification, private applicators must earn 6 CEUs covering core content and 3CEUs per category of certification, or they must pass written exams for private applicator certification and each category of certification	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides properly and safely	To renew certification, private applicators must pass written open-book take home exam and proctored closed book test for each category of certification (fumigation only)
Applicators must earn at least half of all required CEUs in the 18 months preceding the expiration of their certification	States must ensure that applicators maintain a continuing level of competency and ability to apply pesticides properly and safely	Applicators must earn CEUs 3 out of 5yrs of the certification period. Cannot accumulate CEU's the 1st yr. you become certified
Noncertified Applicators Working Under the Direct Supervision of Certified Applicators		
Require annual pesticide safety training for noncertified applicators using RUPs similar to training for handlers under worker protection standard (WPS) (Safety, proper pesticide application techniques, responding to spills, protecting oneself, others, and the environment) Exemption from training for those that have valid WPS training and those who have taken the core exam.	No Requirement for instruction in safety, proper pesticide application techniques, responding to spills, protecting oneself, others and the environment	No requirement for annual training. Certified applicator responsible for assuring that noncertified persons working are qualified to handle pesticides and are instructed in the application of the specific pesticide used in each particular application. Service technicians (ST) must pass ST exam & retest every 5 yrs. The certified applicator is required to be accessible by phone or other device for STs & must be onsite for non-STs
Require the supervising applicator to provide specific instructions related to application and ensure that the noncertified applicator has a copy of the labeling at the time of application.	Supervising applicator must provide general guidance on applying a specific pesticide.	Same as above
Require supervising certified applicators to provide means for immediate communication with noncertified applicator.	Supervising applicator must provide noncertified applicator with instructions on how to contact the supervisor in the event he or she is needed.	Certified applicators shall be accessible to service technician at all times during the application of the pesticide by telephone, radio, or any device approved by the Board. If a non-certified applicators is applying pesticides, the certified applicator must be onsite

Require record keeping of annual training completed by noncertified applicators	No records required	No records required
Program Administration		
Require candidates for certification and recertification to present identification	No identification required for persons seeking certification	Identification required for certification testing and recertification testing, but not for CEUs
Require certification exams to be closed book and proctored	Certification exams must be written	Private applicator tests are not closed book and proctored. All others are closed book and proctored.
Require dealers of RUPs to maintain records of sales	No requirement to maintain records	Require dealers of RUPs to maintain records of sales
Require specific information on the credential (License) issued to a certified applicator	No federal requirements for what information must be included on documents used to verify an applicator's certification status	Require specific information on the credential (License) issued to a certified applicator
States must require applicators to maintain records on RUP reporting: name and address of person for whom the RUP applied, location of application, **size of treated area**, site to which RUP was applied, **Time** and date of application, product name and EPA registration number of RUP applied, total amount of RUP applied per application and location**, name and certification number of certified applicator and name of noncertified applicators that made the application** under the supervision of the certified applicator.	States must include requirements for certified commercial applicators to maintain for at least 2 yrs routine operational records containing information on kinds, amounts, uses, dates, and places of application for RUPs.	Minimum record keeping: start and stop time, total amount of pesticide used, name and address of the company, name and address of person for whom applied, legal description of the land where applied, date of application, application rate, dilution rate for mixing, total quantity of tank mix used, complete trade name of product, EPA reg number of product, target pest, site where pesticide was applied, restricted entry level as stated on product label, Will need to add name & CA # of person that applied, currently company name is required.

Table 1. CEU requirements and recertification schedule for pesticide applicator categories in Oklahoma.

Year			#	Category	CEU's (5)	4	3	2	1
2009	2014	2019	3a	Ornamental & Turf	20	16	12	8	4
			3b	Interiorscape	10	8	6	4	2
			3c	Nursery/Greenhouse	15	12	9	6	3
			7a	General Pest	20	16	12	8	4
			6	Rights-of-Way	15	12	9	6	3
Year			**#**	**Category**	**CEU's (5)**	**4**	**3**	**2**	**1**
2010	2015	2020	4	Seed Treatment	5	4	3	2	1
			5	Aquatic	5	4	3	2	1
			7c	Fumigation	10	8	6	4	2
Year			**#**	**Category**	**CEU's (5)**	**4**	**3**	**2**	**1**
2011	2016	2021	11	Bird & Predatory Animal	5	4	3	2	1
			12a	Pressure Facility	5	4	3	2	1
			12b	Groundline Utility Pole	5	4	3	2	1
			13	Metam-Sodium	5	4	3	2	1
Year			**#**	**Category**	**CEU's (5)**	**4**	**3**	**2**	**1**
2012	2017	2022	1b	Agriculture Animal	5	4	3	2	1
			2	Forest	10	8	6	4	2
			8	Public Health	15	12	9	6	3
			ST	Service Technician	NA				
Year			**#**	**Category**	**CEU's (5)**	**4**	**3**	**2**	**1**
2013	2018	2023	1a	Agriculture Plant	20	16	12	8	4
			A	Aerial	5	4	3	2	1
			7b	Structural	20	16	12	8	4
			10	Demonstration & Research	20	16	12	8	4
			PA	Private Applicator	NA				

Enhancing Grassland Ecosystem Sustainability in the Tall Fescue-Belt: a Partnership for Innovation

Integration of warm-season forages can enhance ecosystem health in the tall fescue (TF) belt, a region dominated by forage-based agriculture and that accounts for 24% of US beef calf production. The "summer forage slump", fescue toxicosis, and recurring, severe, summer droughts, all underscore the need for improved summer forage programs in the region. Native grasses (NWSG) are high quality forages offering improved drought resiliency (C_4), low inputs (i.e., smaller carbon footprint), enhanced soil health, increased carbon sequestration, biodiversity, and wildlife habitat, and could, along with other warm-season perennials, improve 37 million acres of existing TF grasslands and have major economic and production benefits for over 330,000 cattle producers.

We will develop a large-scale, inclusive partnership (agricultural Extension force of Land Grant Universities, cattlemen's and forage associations, and the conservation community, as well as NRCS) across 4 states in the core of the TF-belt representing 52% of the region's cattle. This partnership will implement a broad-based technical assistance program to deliver fundamental, innovative change to grassland ecosystems across the TF belt. Working through our partnership, we will use EQIP practices (establishment of NWSG, other summer forages, and, as needed, fencing, waterers, managed grazing) to demonstrate for producers practical integration of warm-season grasses into TF-based forage systems. Demonstration sites will be strategically selected with a focus on high visibility and community influence (e.g., Research and Education Centers, leading producers within the forage community). We will design a focused, strategic monitoring program to provide strong, locally relevant, production-based information that will enable us to clearly document for producers, through a highly credible outlet (i.e., combined message from 10 Extension services), these benefits and how they relate to EQIP practices. We will develop an aggressive, strategically focused T/A program to reach producers and opinion leaders throughout the TF belt to maximize the potential for widespread implementation of grazing innovation and resulting improvements to ecosystem health.

Attachment #10

Agriculture and Natural Resources

August 2015

Action Item: Online Professional Development Training

- Background
  - Extension Agents face the enormous challenge of staying abreast of current trends and knowledge in agriculture when balanced with time and expense of face-to-face training.
- Committee Involved
  - ANR
- Action Requested
  - Encourage Southern Region Extension Directors to promote development of ANR online professional development training courses for extension faculty that can be shared regionally.
- Time Line
  - Sept. 2015 to Aug. 2020

Action Item: Enhanced Grassland Sustainability in Tall Fescue Belt

- Background
  - Integration of warm season forages can enhance ecosystem health in tall fescue belt and benefit beef producers
- Committee Involved
  - ANR
- Action Requested
  - A vote of support to encourage the development of a regional scale research and extension project focused on the integration of warm season grasses in the tall fescue belt (10 states)
- Time Line
  - Sept. 2015

Action Item: Farm Bill Program Reporting

- Background
  - Each state has significant educational programming associated with the Farm Bill
- Committee Involved
  - ANR
- Action Requested
  - Encourage all universities to submit Farm Bill training data through the online Farm Bill reporting portal to collect outcomes associated with the Farm Bill
- Time Line
  - Sept. 2015

Information Item: Joint Meetings with ANR Regions

- Background
  - Joint Southern and North-Central region ANR meeting held in Washington D.C. in 2015
- Committee Involved
  - Southern and North Central ANR
- Information
  - Planning a joint meeting of the North-Central and Southern ANR program leaders in 2017
- Time Line
  - June 2017

Accomplishments: Professional Development

- Prepared a recommendation report on the sharing of online resources: Regional Professional Development for Extension Faculty via Online Moodle Courses

Accomplishments: Joint Meeting

- Held a joint North-Central and Southern Region ANR meeting June 2-4, 2015 in Washington, DC

Accomplishments: Farm Bill Reporting

- Farm Bill Reporting
  - Reviewed the Farm Bill reporting portal and determined it is a good platform for capturing the impact of the Farm Bill Education Program

Accomplishments: Enhanced ANR Communication and Planning

- Communications
  - The Southern Region ANR-PLN group held 4 telephone conferences during 2014-15 to discuss meetings and programs

Southern Region Program Leadership Network
Cooperative Extension System

New Committee Officers and Key Contacts
September 1, 2015 – August 31, 2016
(See submission instructions at end of document)

Committee Name	Agriculture & Natural Resources	Submission Contact Name:	Billy Lawton
Chair	Billy Lawton	Submission Contact E-mail	bclawton@pvamu.edu
Vice-Chair	Bobby Grisso	Submission Contact Phone	Office 936-261-5117 Cell 210-849-4323
Secretary	Melissa Stewart	Date of Submission	08/26/2015
PLC Representative 1862	Tom Melton	PLC Representative 1890	Louie Rivers
1862 Advisor	James Trapp	1890 Advisor	Ray McKinnie

Annual Plan of Work
September 1, 2015 – August 31, 2016

Item to Accomplish	Responsibility (Names of people assigned to item)	Key Contact (Person who will serve as a key contact for item)	Goal Date (Anticipated completion date)	Completion Date (to be filled in when completed)
Work with North Central ANR Program Leaders to organize a 2017 ANR Program Leaders meeting. Will invite other regions to participate. Focus on grant opportunities and extension programming.	Grisso, Stewart, Mukhtar	Grisso	June 2017	
Identify foundational professional development training needed by ANR county extension educators across the	Hurt, Palmer, Lawton, Mellion-Patin, Mukhtar, Stewart, Miller, Mask, Main, Karki, M Burns	Hurt	July 2016	

Item to Accomplish	Responsibility (Names of people assigned to item)	Key Contact (Person who will serve as a key contact for item)	Goal Date (Anticipated completion date)	Completion Date (to be filled in when completed)
southern region				
Inform and provide updates to forage and beef specialists about the Enhanced Grassland Ecosystem Sustainability in the Tall Fescue-Belt: A Partnership for Innovation project in the states involved in the southern region	Burns, Palmer, Cartwright	Burns	December 2015	
Schedule two conference calls per year between the ANR-PLN and NRCS national leadership to improve communication	Burns, Grisso, Stewart, Cartwright	Burns	December 2015	

Quarterly Conference Call Schedule: (Dates/Times – Please indicate time zone)
October 27, 2015 (Tues) 10:00 am EST
November 17, 2015 (Tues) 10:00 am EST
February 2, 2016 (Fri) 10:00 am EST
May 11, 2016 (Wed) 10:00 am EST

To add more lines, if needed: Place curser in last box of the last row. Hit "tab." Another row should appear.

Submission instructions:

- Rename the document with your committee name initials (ANR, CRD, COM, FCS, 4H, ITS, MM, PSD, PLC) such as: ANRplanofwork.doc
- Email document to rachel.welborn@msstate.edu
- If you have problems, contact Rachel Welborn at 662-325-5885 or rachel.welborn@msstate.edu.

Southern Regional Extension Forestry Report
William G. Hubbard, Regional Forester
Southern PLN Meeting
Orlando, Florida
August, 2015

Southern Regional Extension Forestry

Background: The Southern Regional Extension Forestry Office was created in 1979 to serve the thirteen 1862 Land Grant Universities (LGU's) and the USDA Forest Service – Southern Region/State & Private Forestry Unit (USDA-FS, SPF). The position of Regional Forester with the SREF office is the result of a federal MOU on forestry education and technology transfer signed by several agencies in 1978. The MOU, the result of federal legislation entitled the Cooperative Forestry Act of 1978 was signed by the USDA Forest Service, Extension Service, Soil Conservation Service and National Associate of State Foresters. The Southern Regional Extension Forestry Office is the only regional Extension Forestry office in the country at this time.

Mission: The mission of the office has expanded over the years to be more comprehensive and state-serving. The current mission states: " The mission of the Southern Regional Extension Forestry office is to serve the southern Land Grant University System and USDA Forest Service through the collaborative development of forestry technologies, tools, products and programs that improve the efficiency, effectiveness, relevance and impact of supporting institutions.

Administration: The Association of Southern Regional Extension Directors (ASRED) currently administers the project jointly through an official MOU with the Deputy Regional Forester of the USDA Forest Service – State & Private Forestry Unit in Atlanta, Georgia. The Extension Director, University of Georgia Cooperative Extension Service at UGA serves as the point of immediate supervision and works with the ASRED Forestry Committee to provide oversight and guidance to the Regional Forester program. The Regional Forester in turn supervises a half-time Business Manager and a half-time Communications and Marketing Director who are funded by contributions from ASRED membership institutions and the USDA Forest Service. In addition, the Regional Forester hires staff to coordinate and lead projects that are undertaken to support the Southern Land Grant Extension Services, the Forest Service, and other key stakeholders. These projects range from large, regionally coordinated competitive grants, to service oriented projects such as the development of websites and mobile applications. Staff include 7 full time specialists in urban forestry, wildland fire education, forest restoration, climate change, bioenergy, forest health, forest economics, Internet technologies, mobile application development, Geographic Information Systems, (GIS) and a variety of other topical areas and issues. Staff are assisted by several undergraduate students who provide data input, graphic design and other services.

Major Programs and Projects: The SREF budget for the three-year calendar year period of 2014-2016 includes over $1,000,000 in grants and contracts. Several major initiatives and programs are listed below. Several others will be listed in the annual report.

Climate Learning Network – SREF is providing leadership in the creation of an eXtension Learning Network on Climate Change, which will connect Cooperative Extension professionals

and facilitate peer-to-peer learning. This project is co-funded by the Office of the Chief Economist, USDA and the eXtension Foundation. The Learning Network, which is currently in development, includes input from the USDA Climate Hub leadership as well as experts working on climate change within the LGUS. SREF has agreed to develop a number of deliverables for the first phase of the project, including a survey of climate hub leaders, the development of a database of agriculture and forestry professionals in the Eastern US, and the creation of six online Moodle® learning modules for the eXtension site. Phase 2 expansion has been funded to include the Pacific Northwest Climate Hub in the Network and the development of additional, targeted Moodle® modules. Discussions are underway to expand the Learning Network to all Climate Hubs in the country in a manner that ensures the development of a powerful tool adaptive to users' needs at various scales.

SERCH Tools (Service Foresters Toolkit) – SREF is also working directly with the Southeastern Regional Climate Hub (SERCH) Director and staff to incorporate climate change information, data, and tools into version 2.0 of the Service Forester's Toolkit Mobile Application program that was developed in 2014 and available on Google Play® and the App Store®. The Service Forester's Toolkit App will include numerous other facts, tables and figures that will continue to be helpful to state and county Extension professionals.

PINEMAP - SREF staff have worked on the Extension component of a NIFA AFRI CAP program, funded at 20 million dollars for 5 years that includes ~80 researchers from 12 southern LGU's and the federal government. There are over 30 million acres of pine plantation in the Southern United States and changes in climate will affect these forests. The PINEMAP project's goals include development of tools and technologies for professionals to use in climate adaptation and mitigation scenarios surrounding pine plantation management. Over the past four years, the SREF office has provided leadership in the development of Extension materials and tools for professional foresters, landowners, policymakers and youth. Several of the products can be accessed online at http://www.pinemap.org. Additionally, SREF has leveraged resources from this project towards development of the Southern Region Extension Climate Academy. PINEMAP has entered its 5th and final year with a possible one-year extension on the horizon.

Southern Region Extension Climate Academy (SRECA)- The SREF office with funding through PINEMAP, in combination with leadership from PLN, and other co-organizers, developed and planned the Southern Region Extension Climate Academy. SRECA was held in Athens, GA in September, 2014 and included 120 Extension agents and specialists from across the South, who were trained in climate science, climate communication, and sector specific information in livestock, forestry, coastal and crop production. The goal of SRECA was to provide opportunities for Extension employees to learn more about how climate change may affect their resources, how to talk about it with their clients, and tools and resources towards adaptation and mitigation.

Southeastern Integrated Biomass Supply Systems (IBSS) – This was another large NIFA AFRI CAP program in the biomass/bioenergy arena. SREF has assisted with regional leadership in

the development of Extension materials for professionals interested in learning more about both agriculture (switchgrass) and woody biomass (short rotation woody crops and pine) opportunities. This project, now in its 5th year, has involved research, Extension and teaching on all aspects of the biomass to bioenergy production system. This included research and Extension on growth, management, harvest, storage and transportation of crops, feedstock conversion, and bioenergy marketing and policy aspects. This project was funded at 15 million dollars for 5 years and involved 4 land grant universities and the private sector, and may continue for a 6th year. A majority of the Extension materials and tools can be found online at http://www.se-ibss.org.

Urban Forestry & Energy Conservation eXtension site (UFEC) – This project is entering its second phase which involves the development of 4 high definition videos highlighting how urban forestry management practices can enhance energy conservation. Videos will be featured on the current eXtension site and will be available on You Tube. SREF is partnering with Virginia Tech and providing monetary resources to their professionals to assist with the development of the videos and enhance the site. The original site, funded in 2012 is located at http://www.extension.org/trees_for_energy_conservation and contains articles, FAQ's and other resources for the professional and homeowner interested in urban trees for energy conservation.

National Cohesive Wildland Fire Management Strategy: Southern Region,Communication & Extension Activities - SREF works closely with several federal agencies to improve upon the implementation of the National Cohesive Strategy (CFS) in the Southern Region. SREF developed several marketing and educational products and activities in support of CFS, including: a social network analysis of the southern fire community, development of the www.southernwildfire.net website, creation of 30+ fact sheets highlighting Southeastern wildfire success stories, co-development of CFS southern region value cards, and several other outreach products. SREF staff attended regional meetings in 2015 to improve communications and programming in support of CFS, including: the Tucson, Arizona Extension Fire Workshop (Preparing for Wildfires: Moving from Crisis to Opportunity); the Tuscaloosa, Alabama fire conference (5th Fire in Eastern Oak Forests Conference); and Tallahassee, Florida Prescribed Fire Communication Summit (Best Practices for Communication & Delivery of Prescribed Fire Messaging).

Shortleaf Pine Restoration Initiative (SPI) – SREF coordinates with numerous federal, state, and private partners, including state Extension, to promote the new Shortleaf Pine Initiative (SPI), through marketing, educational products, and other support. Many of the products and other support can be found at the Shortleaf Pine Initiative website SREF created: www.shortleafpine.net. For the website, SREF developed 17 shortleaf fact sheets; gathered nursery, cost-share, and regional expert contact lists; created an online site suitability mapping tool; set up a regional events listing and calendar; wrote the Initiative overview and history; and researched and compiled other relevant sites and links. SREF is also currently developing an extensive, shortleaf literature library; a network of featured demonstration sites; archived video presentations; and additional fact sheets for the website. SREF staff have assisted in editing and adding relevant information to the Regional Shortleaf Restoration Plan; are assisting in planning the 3rd Biennial Shortleaf Pine Conference; have developed a social media plan for

the Initiative on Facebook and Twitter; and have attended numerous regional shortleaf pine-focused workshops to present information on the SPI and network with relevant contacts, showcase SREF products related to the SPI, and to record relevant lectures for the creation of educational video presentations to be housed on the SPI website and YouTube.

Economic Importance of Forestry in the South Initiative – The SREF office is leading an effort to develop tools, methods and products for use by state forest economic and marketing specialists. The SREF staff worked with Mississippi State University Extension Forester James Henderson to develop regional fact sheets on the economic importance of forestry in the South. The SREF office also organized a summit in the spring of 2015 that brought together more than 30 experts in forest economics and IMPLAN modeling from across the southern region, to develop a "standard" methodology for states to be able to develop comparable state-level fact sheets with IMPLAN data. A survey of southern forest economists which will provide specific details on method analysis will be launched in September, 2015. A website is being developed to share this information for the region, and finally, a "Governor's Summit," which will include other stakeholders, policymakers and agricultural economists, is being planned.

Regional Forest Health Initiative – SREF is partnering with the USDA Forest Service – Forest Health unit in Atlanta and has hired a regional Extension forest health specialist to construct a regional training and education program aimed at Extension and state forestry agency professionals at the county, state, and regional levels. This effort aims to ameliorate misinformation and lack of information on several important forest health issues (including invasive species) in the Southeast. The Extension forest health specialist will be developing a webinar series and investigating other online, print, and face-to-face opportunities to improve the fundamental and working knowledge of on-the-ground educators and technology transfer specialists.

The Professional Development Webinar Series: The SREF office has provided a webinar portal service for several years servicing the Southern region and beyond with the forestrywebinars.net series. SREF has also hosted the NRCS's online training library at conservationwebinars.net and is now working with the Forest Service to host webinars at sustainableforestswebinars.net. Three other portals include bioenergywebinars.net, climatewebinars.net and urbanforestrywebinars.net to handle related stakeholder groups. These webinar sites are robust, content management style portals with access to live and archived events, certification, marketing tools, green savings and impact calculators, and now social media and ranking/rating tools.

State Impacts & Success Stories: The SREF office strives to work collaboratively with all 13 states in the Southern United States. With an enhanced staff in recent years, the quality and quantity of work with each state has increased exponentially. Today, SREF staff works closely with Extension and state forestry agency in every state in the Southern U.S. A few highlights are listed here with apologies in advance for missing anything in particular:

Alabama – SREF staff work with Auburn state, district and county staff on a variety of projects including the IBSS project referenced above, and the UFEC project, as well as webinar

training options for regional forestry and natural resource agents. SREF collaborated with private foresters on southern success stories for the Cohesive Fire Strategy and Auburn Extension and University on management information (fact sheets) for the Shortleaf Pine Initiative. SREF staff have attended several meetings in Alabama as well and gathered input on state level needs including shortleaf pine restoration education.

Arkansas – The Regional Forester worked with the USDA Climate Hub in Raleigh, NC to obtain funding in the amount of $30,000 to include climate change messaging for Dr. Walkingstick's *Women in the Woods* project. The SREF staff hosted a meeting in Little Rock in March of 2015 and invited forest economists and state Extension Foresters to participate in a working IMPLAN summit. SREF staff travelled to Arkansas to seek advice and guidance from Arkansas Extension, USFS-AR office, and The Nature Conservancy-AR on best ways to market shortleaf pine and develop the Shortleaf Pine Initiative website. These groups provided an educational tour of key shortleaf management sites that helped shaped website development.

Florida – SREF staff have worked closely with the University of Florida to develop climate materials for the PINEMAP project, and have edited biomass fact sheets for a regional Woody Biomass Ambassadors Guidebook. Additionally, SREF staff worked with the Florida ANR leader to provide leadership and planning for the Southern Region Extension Climate Academy. SREF staff participated in the regional Prescribed Fire Communication Summit (July 28-29th, 2015) at Tall Timbers Research Station in Tallahassee, which provided information for advancing communications and marketing for the National Cohesive Wildland Fire Management Strategy and the Shortleaf Pine Initiative.

Georgia – The SREF office works closely with the University of Georgia on a variety of projects including providing web support for the National Timber Tax Website and the Georgia Feral Hog website. SREF also works with UGA faculty and staff to develop and deliver materials through the PINEMAP project and a workshop was held in Tifton that brought together professionals in four states (Alabama, Florida, Georgia and South Carolina) to review the results of the PINEMAP project and other climate and weather information and tools. The Regional Forester serves on UGA's Southern Forestry GIS conference planning committee (SoForGIS) and assists with the marketing activities for that conference. SREF worked on several grants with UGA professors including a regional DOE bioenergy grant and an heir's property grant to USDA. The Regional Forester also speaks at the Southern Outlook Conference at the request of the UGA Extension agriculture economist. SREF staff has presented an overview of the Shortleaf Pine Initiative at local professional foresters meetings and presented SREF materials available to County Extension agents at several trainings set up in the state.

Kentucky – The SREF staff assisted UK Extension forestry faculty with setting up a field tour for high school students at a Georgia Tree Farm. The Regional Forester provided support letters for the development of a mobile application for Kentucky and Southern forestry logging professionals. SREF presented shortleaf pine as a reclamation species to regional foresters, mine reclamationists, UK scientists, and biologists at the joint American Society of Mine Reclamation and Appalachian Regional Reforestation Initiative meetings in Lexington, KY this June 2015. SREF staff also met with a UK urban forestry professional to discuss regional urban forestry needs and issues.

Louisiana - The Regional Forester regularly presents at the annual Ark-La-Tex Forestry Forum and works closely with the regional agents and state staff on programs and projects of

mutual interest. The Regional Forester recommended that a National Extension Foresters meeting be held in Southern Louisiana in the fall of 2015. This event last occurred over 10 years ago and will be held at the LUMCON facility in southern Louisiana in November, 2015. The Regional Forester is also involving the State Extension Forester in a key leadership role in the Southern Forest Economic IMPLAN Impact work. SREF worked with the LSU AgCenter to develop educational materials for the Shortleaf Pine Initiative.

Mississippi - The Regional Forester obtained resources over the last two years to purchase IMPLAN data for Mississippi State Extension Forestry to run models for regional economic importance of forestry fact sheets (over $30,000). The Regional Forester has provided letters of support for awards and recognition of state Extension staff. These support letters combined with other factors have been successful as state specialists have received several awards.

North Carolina – SREF staff work closely with NCSU faculty and staff to develop materials and tools on the PINEMAP project, the Climate, Forests, & Woodlands eXtension CoP, the Climate Learning Network, and the IBSS project. The collaboration between these two groups has resulted in several regional fact sheets and products that can be found online at http://www.pinemap.org and http://se-ibss.org. In addition, there are several other regional SREF related projects that are being led by NCSU staff including the Webinar Series Portal. In addition, SREF staff have been working with staff at NCSU and the NC Forest Service on the Shortleaf Pine Initiative and an SREF staff member delivered a presentation on the Shortleaf Pine Initiative's history and goals at a Service Forester and Consulting Forester Meeting in Morganton, NC. SREF also works with NC Extension Forester, Jennifer Evans, through the Southeast Regional Partnership for Planning and Sustainability (SERPAS) prescribed fire work group, in support of the National Cohesive Wildland Fire Management Strategy.

Oklahoma – The state Extension Forester retired in 2014 but the SREF staff work closely with the Oklahoma forestry agency to include them in regional Extension programming. This includes working with them on regional climate change, bioenergy and forest economics work as well as including non-Extension staff on the Shortleaf Pine Initiative and the Cohesive Fire Strategy. Additionally, SREF is also developing a forestry economic importance factsheet for Oklahoma, by leveraging data obtained from IMPLAN analysis conducted for the regional economic project.

South Carolina – The SREF staff include Clemson Extension in as many ways as possible and have visited South Carolina to participate in workshops and meetings. South Carolina is also without a state Extension Forester at this time, but the SREF staff includes the state regional foresters with Clemson in all mailings and correspondence. Moreover, the Regional Forester worked with Clemson faculty and staff to develop a national RREA grant to engage wood products Extension Specialists on the regional level in a summit and online portal tool for county Extension use, SREF worked with South Carolina fire managers and foresters on the Cohesive Fire Strategy, and the SREF's marketing team is working closely with Clemson's communications group to streamline announcements and produce smoother and more cohesive marketing publications with the possibility of further collaboration in the future.

Tennessee – The Regional Forester and SREF staff work closely with UT specialists on the Shortleaf Pine Initiative (SPI) and the IBSS project. In particular, the Shortleaf Pine Initiative is based at the University of Tennessee. SREF developed the SPI website, coordinated the

production of 17 fact sheets, developed an online site suitability mapping tool, and numerous other educational and marketing materials for SPI. SREF is working closely with UT forestry Extension and others to plan the 3rd Biennial Shortleaf Pine Conference.

Texas – The Regional Forester and SREF staff are working with the Texas A&M Agrilife Extension Service on PINEMAP and the regional climate change initiative, the webinar series, the National Cohesive Wildland Fire Management Strategy, and several other regional initiatives. Additionally, SREF staff have utilized videos of presentations from Texas Extension service's workshops and co-created webinars and factsheets for regional use.

Virginia – The Regional Forester and SREF staff work with Virginia Tech Extension Service and other land grant faculty and staff on the PINEMAP project, the UFEC urban trees and energy conservation project, a new Beginning Farmer and Rancher project on non-timber forest products and several other programs. The Regional Forester and staff work with the regional Extension foresters within the state on several regional and national initiatives as well including the National Forestry 4-H Invitational.

Plans for 2015-2016: In the coming year, the SREF office will continue to offer a variety of services to the Land Grant Universities in the South, the USDA Forest Service and the state forestry agencies in the Southern United States. The SREF office will continue its active engagement with Extension foresters and state agency professionals in every state in the Southern United States. This includes working closely with state Extension foresters, ANR Leaders, Extension Directors and others. As in other years, staff of SREF are more than willing to continue to assist state efforts by traveling to state and county meetings to describe the products, programs and tools that the office is developing in cooperation and collaboration with partners. These visits are also important to gather input and information regarding ways that SREF can better serve individual states and the region. The Regional Forester will investigate opportunities for regional promotion and further development of forestry Extension in the South. Specific plans on the horizon include seeking further opportunities to work to develop a Southern Family Forest Center. This proposed center would include practical and applied research, and the development of tools to meet the professionals' needs and augment their ability to engage, educate and empower the millions of forest landowners in the Southern United States.