

**ESCOP Executive Committee Meeting
Hilton Bonnet Creek Resort Hotel
14100 Bonnet Creek Resort Lane
Orlando, Florida.**

Monday, November 3, 2014

1:45-5:00 PM

Attendees: Dan Rossi, Eric Young, Adel Shirmohammadi, Bill Bown, Ernie Minton, Connie Kays, Bret Hess, Bill Frost, Deb Hamernik, Jeff Jacobsen, Steve Slack, Marikis Azvarez, Carolyn Brooks, Shirley Hymon-Parker, Hunt Shipman, Parag Chitnis, Steve Loring, Mike Harrington, Gary Thompson, Saied Mostaghmi, Clarence Watson, Jane Schuh, Harriett Paul, Bob Shulstad, Sonny Ramaswamy, Moses Kaird, Darren Kate, Marshall Steward

Item	Action Items
1.0	Approval of Minutes - Approved Approval of Action Items - Approved
4.0	Approved - motion to approve ESCOP's CLP representative presenting this legislative issue to the CLP at its meeting on Tuesday morning, Nov 4.
5.0	Approved - Motion to approve composition of permanent joint ECOP/ESCOP National Impact Database Steering Committee
8.0	Approved - Motion to endorse unified message concept and support working toward development of that message

Item	Topic and Presenter(s)
1.0	<p>Call to Order - Bob Shulstad, Chair</p> <p>1.1 Approval of the Agenda</p> <p>1.2 <u>Approval of July 22, 2014 ESCOP Meeting Minutes, San Diego, CA</u></p> <p>1.3 Approval of Interim Actions</p> <p>Approved - Minutes Approved - Action Items</p>
2.0	<p>Economic Research Service Update - Mary Bohman, Administrator, USDA-ERS</p> <p>In meeting report:</p>

	<ul style="list-style-type: none"> • Amber Waves app available for tablets and smartphones • Distributing info in small bites so stakeholders can digest it easier • Series of charts on different agricultural segments that are released and updated on a rotating basis. All available as downloadable files in hi res graphics • Also using social media to get info out broadly • Partnerships - \$5 -9 Million per year in extramural funding, more diverse areas than intramural <ul style="list-style-type: none"> ○ Core investments are aimed at long term trends ○ Work closely with Food Service Agency • Working to increase diversity in social sciences/economics • Challenge hiring people with experts on ag markets • How can AES help ERS? <ul style="list-style-type: none"> ○ Increase knowledge about ERS's services ○ Increase partnerships, particularly on grant applications ○ Encourage interns and postdocs at ERS ○ Invitations to speak at meetings and present seminars • Need to maintain national focus and having everyone in DC helps to do that • As distance technology is refined the possibility of ERS scientists being located on campus becomes more doable • Don't expect a widespread placement of ERS on campus, but may be some in future
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3.0	<p>NIFA Update - Sonny Ramaswamy, USDA-NIFA</p> <p>In meeting report:</p> <ul style="list-style-type: none"> • Matching - new language on web site defining this, most intuitions will be exempt, excepted, or waived • Commodity Boards with check offs can propose RFA's with matching funds from AFRI or other competitive program. Will be an upper and lower limit, other polices will be settled soon • Centers of Excellence – language defining this is currently with attorneys. Center of Excellence status will only be used to break tie if review marks are exactly same. Criteria for recognizing Center of Excellence are coming • Foundation for Food and Agriculture Research Board has 1st face to face meeting this Thursday and Friday <ul style="list-style-type: none"> ○ \$200 Million allocated to attract matching funds from industry ○ FFAR has web site now • Workshop being planned on gap between what industry need in their employees and what Universities are teaching/training <ul style="list-style-type: none"> ○ ESCOP should be involved in this workshop • NRC review of AFRI – implementing most the recommendations, except not dropping large grants completely
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4.0	<p><u>International Treaty on Plant Genetic Resources for Food and Agriculture Ratification Support on CLP Agenda</u> - Gary Thompson. Hunt Shipman and Eric Young</p> <ul style="list-style-type: none"> • <u>ASTA Flyer on Ratification</u> <p>In meeting report:</p> <ul style="list-style-type: none"> • Background given at workshop in Jekyll Island, info is on web for that session • Support Senate ratification so US will have a vote on modifying the SMTA terms
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	<ul style="list-style-type: none"> Gary Thompson/Shirley Hymon-Parker – motion to approve ESCOP’s CLP representative presenting this legislative issue to the CLP at its meeting on Tuesday morning, Nov 4. – Approved
5.0	<p><u>Recommendation on Impact Database Steering Committee</u> - Bill Brown and Eric Young</p> <p>In meeting report:</p> <ul style="list-style-type: none"> Reviewed proposal for permanent joint ECOP/ESCOP National Impact Database Steering Committee Motion to approve committee composition – Bill Brown/Gary Thompson, Approved
6.0	<p><u>Healthy Food Systems, Healthy People Steering Committee Update</u> - Shirley Hymon-Parker, Clarence Watson, and Eric Young</p> <ul style="list-style-type: none"> <u>Steering Committee Membership</u> <p>In meeting report:</p> <ul style="list-style-type: none"> Steering committee appointed, one conference call
7.0	<p><u>Seeds & Breeds Dialogue Update</u> - Steve Slack and Jeff Jacobsen</p> <p>In meeting report:</p> <ul style="list-style-type: none"> Two conference calls, waiting on Sonny to send a statement on goals and outcomes desired from conversation with S&B
8.0	<p>Unified Message - Greg Bohach and Wendy Wintersteen</p> <p>In meeting report:</p> <ul style="list-style-type: none"> Project started last November and Riley Foundation is leading effort Current document is simply a call for a unified message on increasing agricultural research funding December 5th program at National Press Club will start public discussion AHS have endorsed it and would like ESCOP’s endorsement and letter of support Motion to endorse unified message concept and support working toward development of that message - Gary Thompson/Adel Shirmohammadi, Approved
9.0	<p>Central State University</p> <p>In meeting report:</p> <ul style="list-style-type: none"> Beginning in 2016 Central State University will receive Evans-Allen and 1890 Extension funds Amounts quoted by NIFA don't seem correct so 1890's are asking then to check formula calculations

10.0	<p><u>Budget & Legislative Committee's Return on Investment White Paper</u> - Gary Thompson and Mike Harrington</p> <p>In meeting report:</p> <ul style="list-style-type: none"> • Return on Investment white paper <ul style="list-style-type: none"> ○ ESCOP/ECOP effort to document value of competitive funding as well as competitive ○ Hope to have a final version of document by CARET/AHS meeting in March
11.0	<p>FSLI Update - Marshall Stewart, FSLI Director</p>
12.0	<p>Communication and Marketing Committee Update - Nancy Cox and Dan Rossi</p> <p>In meeting report:</p> <ul style="list-style-type: none"> • More focus on general public awareness • Improved web site a lot and enhanced how often it shows up in on-line searches • Enhanced social media effort • Focused more on traditional media, over 500 stories in 3rd quarter • Currently doing message testing research with focus groups
13.0	<p>CARET Report - Connie Kays, CARET Liaison to ESCOP</p> <p>In meeting report:</p> <ul style="list-style-type: none"> • Following their new strategic plan
14.0	<p>Public Data from Hatch</p> <p>In meeting report:</p> <ul style="list-style-type: none"> • Discussion is ongoing about whether or not Hatch activity should be included in public disclosure of data requirements • If Hatch is excluded it may appear those funds are not as important as competitive • Guidelines for data management plans will be included in some RFA's released after Jan 1 • Data management plan guidelines for Hatch will be developed last
15.0	<p><u>March ESCOP meeting time</u> - Bob Shulstad and Eric Young</p> <p>In meeting report:</p> <ul style="list-style-type: none"> • CARET/AHS meeting and Hill Visit has been moved to a day later, starting on Monday • Therefore ESCOP can meet on either Monday afternoon or Tuesday morning • Majority preferred Tuesday • Next ESCOP meeting will be Tuesday morning, March 3, 2015, in DC

16.0	<p>2015 ESS, AES, ARD Meeting & Workshop Plans - Shirley Hymon-Parker and Carolyn Brooks</p> <p>In meeting report:</p> <ul style="list-style-type: none">• Monday, September 28 – 30, 2015 in Charlotte, NC at the Ballantyne Hotel• Start with regional meetings Monday afternoon and end with dinner Wednesday night• At some point there will be a tour of the Kanapolis research campus where NC A&T and NCSU faculty are working, along with other university and industry scientists
17.0	<p>2016 Joint Meeting with NEDA</p> <p>In meeting report:</p> <ul style="list-style-type: none">• Joint meeting will be at Jackson Lake Lodge in Jackson Hole, WY, week of September 19, 2016

Agenda Item: International Treaty on Plant Genetic Resources for Food and Agriculture Ratification Support on CLP Agenda

Presenters: Gary Thompson, Hunt Shipman, and Eric Young

Background:

A session at the recent ESS/AES/ARD Workshop in Jekyll Island, GA summarized the background and current status of the International Treaty on Plant Genetic Resources for Food and Agriculture. The International Treaty (IT) has been signed by the USA, but not ratified by the Senate. Workshop attendees heard presentations on background and terms of the IT and the position on ratification from representatives of USDA-ARS, Monsanto, LGU plant breeders, and the American Seed Trade Association.

The IT established a multilateral system for facilitated access to plant genetic resources that uses a standard material transfer agreement (SMTA). Positive features of the SMTA include its administrative simplicity, low-cost access to genetic resources, and provisions for maintaining the resources for research and breeding at the discretion of the developer. However, the SMTA also creates challenges for many breeders, particularly those that use patents to protect intellectual property. Some LGU's and companies have adopted a policy of SMTA-avoidance as a matter of necessity because:

1. Patenting plant breeding inventions triggers costly compliance measures, including mandatory monetary benefits sharing and tracking genetic material in perpetuity.
2. Definition of a plant genetic resource is unrealistic given current breeding practices. In theory, it necessitates the tracking of every gene contained in every accession obtained with an SMTA in every cross. In practice, tracking every accession in perpetuity regardless of whether the material is present or confers any commercial value is cost prohibitive for a breeding program and may be technically impossible.
3. Payment rates are unreasonably high and put the original user (payer) at a competitive disadvantage, while secondary accession (from an initially commercialized cultivar) is unrestricted and free. The commercial restriction triggering payment does not restrict access in markets where a patent cannot be acquired, so a developer has no protection in other markets where competitors will have free access without encumbrance by either a patent or the SMTA.

Due to the SMTA terms, a large pool of plant genetic resources is not available to a significant portion of the public and private sector. The current SMTA-defined value sharing proposition is unacceptable to most institutions and companies, and negatively affects benefits returned to society in the form of improved seed and varieties. Simple modifications could improve the SMTA and facilitate plant breeding broadly, positively impact the conservation and sustainable use of plant genetic resources while also ensuring the fair and equitable sharing of benefits derived from their utilization. However, without Senate ratification, the USA does not have a voice in the discussion or a vote on IT changes, although as a signatory, it is subject to the IT's provisions.

Action Requested: Approve ESCOP's CLP representative presenting this legislative issue to the CLP at its meeting on Tuesday morning, Nov 4.

The Time is Right to Ratify

THE INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

As the world population continues to grow, farmers depend on seed researchers to develop new crop varieties.

Using a broad array of parent materials, also known as plant genetic resources, from around the world, seed researchers make crosses over many generations to create varieties with the desired characteristics that meet farmers' and consumers' needs.

- ◆ The International Treaty on Plant Genetic Resources for Food and Agriculture creates a specialized, global system for the management and exchange of plant genetic resources.
- ◆ The U.S. is a signatory to the treaty but ratification is pending. ***Without ratification, the U.S. is missing opportunities to protect our national interests.*** Our companies and government agencies must abide by the legally binding material transfer agreement established by the treaty in order to access international germplasm.
- ◆ The U.S. is the world's biggest market for seed and the largest seed exporter. We cannot afford to be absent from the negotiating table.

American researchers need access to materials in gene banks in other countries and a rational system to manage these exchanges. These diverse genetic resources are the key to solving threats from drought, plant diseases and insects.

- ◆ If the U.S. does not ratify the International Treaty, there is a risk U.S. researchers will not be able to meet the world's most pressing problem - a growing global population.

Important Facts

- ◆ Signed by the U.S. on November 1, 2002.
- ◆ The Senate Foreign Relations Committee recommended ratification in 2010.
- ◆ Placed on the calendar of the Senate for a vote in December of 2010 but was not voted on before Congress adjourned.
- ◆ Over 125 countries, including the EU and Japan, representing major sources of plant germplasm have ratified the Treaty.
- ◆ No other U.S. laws would need to be changed in order for the government to implement the treaty.
- ◆ The treaty will not diminish existing intellectual property protections.

Ratification of the Treaty is supported by the following organizations:

- ◆ American Seed Research Foundation
- ◆ American Seed Trade Association
- ◆ American Society of Plant Biologists
- ◆ Biotechnology Industry Organization
- ◆ Crop Science Society of America
- ◆ National Association of Plant Breeders
- ◆ National Council of Commercial Plant Breeders
- ◆ National Farmers Union

FOR MORE INFORMATION:

www.foreign.senate.gov/treaties/110-19 ◆ www.state.gov/s/l/treaty/pending/index.htm
www.worldseed.org/cms/medias/file/PositionPapers/OnSustainableAgriculture/Single_international_ABS_regime.pdf

Agenda Item: Recommendation on Impact Database Steering Committee

Presenters: Bill Brown and Eric Young

Background:

With increased interest in impacts across the Land-grant system, the ECOP Program Committee and the Measuring Excellence in Extension (MEiE) Implementation Team, chaired by Mary Jane Willis and Joe Zublena, respectively, held a joint meeting in August 2013 with one focus being how best to move forward on an impacts database. Experiment Station and NIFA representatives were also invited to this meeting.

Based on the discussion, an *ad hoc* National Impacts Database Committee (NIDC) was appointed by Willis and Zublena to advise the TAMU group developing the database regarding a public-facing website for the impacts database that would represent all BAA Sections. The committee included Tim Cross (Chair), Tom Coon (ECOP-PC), Eric Young and Bill Brown (Experiment Station representatives), Jenny Nuber (K-Global), and Faith Peppers (Communications). Consequently, the MEiE Implementation Team, the NIDC, and to a lesser extent, the ECOP-PC have been involved in advising and monitoring the development of the database and the design of a public-facing webpage to portray Extension and Research impacts to legislators and staff, media representatives, and others. While this input has been valuable, a more focused, representative, and unified advisory group will improve further implementation and refinement of the database and website.

Proposal

It is proposed that a new joint ECOP/ESCOP National Impacts Database Committee (NIDC) be appointed to replace the current *ad hoc* committee. The proposed charge to the new committee is to monitor and advise the TAMU development team on the refinement and implementation of the database and the public-facing website, provide updates to ECOP and ESCOP as needed, encourage necessary training on how to use the database, promote use of the NIDB by Extension and Research, and publicize use of the information in the database.

It is further recommended that the following be considered regarding this new committee.

1. That the committee be charged as a joint committee by the Chairs of ECOP and ESCOP and report to ECOP and ESCOP.
2. That the committee include the roles outlined below, that currently serving members of the *ad hoc* NIBD committee fill appropriate roles, and that vacancies be filled by appointment by the Chairs of ECOP and ESCOP:
 - a. Two Director/Administrator-level representatives from the Extension Section
 - i. Tim Cross
 - ii. Michael Quart
 - b. Two Director-level representatives from the Experiment Station Section (one of whom serves as AA for NRSP-1)
 - i. Bill Brown
 - ii. Vacant
 - c. One representative from K-Global
 - i. Ashley Hawn
 - d. One representative from the ECOP MEiE Implementation Team
 - i. Joe Zublena

- e. One representative from the ESCOP Multistate Impact Writing Project
 - i. Sarah Lupis
 - f. One Land-grant Communications representative
 - i. Faith Peppers
 - g. One Land-grant Evaluation representative
 - i. Vacant
 - h. One NIFA representative to serve in a liaison role
 - i. Vacant (recommend head of NIFA Planning, Accountability and Reporting)
 - i. One Extension and one Research ED to serve as support staff
 - i. Ron Brown
 - ii. Eric Young
3. That the new committee be co-chaired by an Extension director/administrator and Experiment Station director and that Tim Cross, chair of the current committee, be the Extension co-chair and Bill Brown be the Experiment Station co-chair.
 4. That the NIDC be charged for a 3-year term beginning upon ECOP/ESCOP approval, and that at the approximate 2.5 year point, the committee provide a written report to ECOP and ESCOP with recommendations regarding if and how monitoring and improvement of the database should be provided. If a standing committee is recommended, the report should include guidance on terms, rotation, composition and operation.

Agenda Item: Healthy Food Systems, Healthy People Update

Presenters: Shirley Hymon-Parker, Clarence Watson, and Eric Young

Background:

A brief history leading up to establishment of the Healthy Food Systems, Healthy People Steering committee is below.

- March 2014 - ECOP releases their Health Task Force report, which can be found at <https://www.aplu.org/document.doc?id=5134> .
- July 2014 - Joint COPs Healthy Food Systems, Healthy People joint work session engaged all sections of the BAA, together with the BoHS to set priorities, identify funding sources, and make a recommendation to the PBD.
- July 2014 - As a result of the recommendations from the Joint COPs meeting, the PBD voted to establish a *Healthy Food Systems, Healthy People Steering Committee*. The purpose of the committee, operating with leadership by the BAA and BoHS, is to develop a broad-based initiative for which funding will be sought, possibly in 2017.
- September, 2014 – The Steering Committee is appointed , chaired by Richard Linton (BAA) and Christine Ladisch (BoHS), with Shirley Hymon-Parker and Clarence Watson as the ESCOP representatives.
- October 7, 2014 – The initial meeting of the Committee included a discussion resulting in a decision to focus on the integration and interaction of food nutrition, agricultural systems, and environment and their impact on chronic disease prevention and general human health.
- The next meeting will be late October to discuss formation of work groups around various aspects of the focus. An initial progress report will be given to the Policy Board of Directors at its November meeting.

Action Requested: No action needed, information only.

Academic Programs Section

David Buchanan -Associate Dean of Academic Programs, College of Agriculture, Food Systems, & Natural Resources, North Dakota State University 701-231-7426 david.s.buchanan@ndsu.edu

Jane Schuh -Associate Director of Ag. Experiment Station, Assistant Director of Academic Programs, North Dakota State University 703-231-7841 jane.schuh@ndsu.edu

Administrative Heads Section

Richard Linton -Dean, College of Agriculture and Life Sciences, North Carolina State University 919-515-2668 rhlinton@ncsu.edu

Board on Human Sciences

Christine Ladisch -Inaugural Dean, Health & Human Sciences, Purdue University 765-494-8210 ladischc@purdue.edu

Linda Kirk Fox -Dean, College of Family & Consumer Sciences, The University of Georgia 706-542-4879 lkfox@fcs.uga.edu

Tammy Bray (Advisor) -Dean, College of Health & Human Sciences, Oregon State University 541-737.3256 tammy.bray@oregonstate.edu

Cooperative Extension Section

Rick Klemme -Dean & Director, Cooperative Extension, University of Wisconsin 608-263-2775 richard.klemme@ces.uwex.edu

Celvia Stovall -Extension Associate Director, Urban Affairs/Non-traditional Programs, Alabama A&M University 336-334-7915 ces0038@aces.edu

Council for Agricultural Research, Extension, and Teaching (CARET)

Madeline Mellinger -Founder and CEO, Glades Crop Care, Inc., Delegate from University of Florida 561-746-3740 mmellinger@gladescropcare.com

Experiment Station Section

Shirley Hymon-Parker -Associate Dean of Research, North Carolina A&T State University 336-334-7612 sjhymonp@ncat.edu

Clarence Watson -Associate Vice President for Agriculture Research, University of Arkansas 479-575-8703 cwatson1@uark.edu

International Agriculture Section

Gretchen Neisler -Director Center for Global Connections in Food, Agriculture and Natural Resources, Michigan State University 517-355-0174 gneisler@anr.msu.edu

Insular/Territorial Institutions

Rachael Leon Guerrero -Associate Director AES, College of Natural and Applied Sciences, University of Guam 771-735-2026 rachaeltlg@guam.uog.edu

Non Land-grant Universities

Don R. Topliff -Dean, College of Agriculture, Science, and Engineerin, West Texas A&M University 806-651-2585 dtopliff@mail.wtamu.edu

Regional Rural Development Centers

Scott Loveridge -Professor and Director, North Central Regional Center for Rural Development, Michigan State University 517-432-9969 loverid2@msu.edu

Federal Liaisons (others to be named)

Susie Butler -Director, Partner Relations Group, Office of Communications, Centers for Medicare & Medicaid 410-786-7211 Susie.Butler@cms.hhs.gov

Robert E. Holland -Deputy Director, National Institute for Food and Agriculture, USDA, Institute of Food Safety and Nutrition 202-205-5700 rholland@nifa.usda.gov

Jerold R. Mande Senior Advisor to the Under Secretary, Food, Nutrition, and Consumer Services, U.S. Department of Agriculture 202-720-7711 jerold.mande@osec.usda.gov

DRAFT

Healthy Food Systems, Healthy People Steering Committee

as of 9/16/2014

Support Team:

Ian Maw	-Policy Board of Directors, Administrative Heads Section, Nonland-grant Universities	202-478-6031	IMaw@APLU.ORG
Eddie Gouge	-Policy Board of Directors, Administrative Heads Section, Nonland-grant Universities, Board on Human Sciences	202-478-6028	egouge@APLU.ORG
Wendy Fink	-Academic Programs Section	202-478-6021	WFink@APLU.ORG
Jane Schuchardt	-Cooperative Extension Section	202-478-2059	Jane.Schuchardt@extension.org
Nancy Bull	-Cooperative Extension Section	860-486-6092	nancy.bull@uconn.edu
John L. Phillips	-1994 Institutions	703-573-5700	jphillips@consultjohnphillips.com
Eric Young	-Experiment Station Section	919-513-1746	eyoung@ncsu.edu
Montague Demment	-International Ag Section	202-478-6084	mwdemment@ucdavis.edu

Item 6.0 Seeds and Breeds Dialogue Update

Presenters: Steve Slack, Jeff Jacobsen

Background: Over the past several years, USDA and external stakeholders, including the Seeds and Breeds Coalition, have had conversations about public sector breeding programs. Concerns have been expressed with the shift away from public plant and animal breeding programs at a time when the need for locally-adapted options has markedly increased due to numerous production challenges. For example, it has been articulated that there is a need for more resilient cultivars to adapt to biotic and abiotic stresses, changing consumer demands and the narrowing of germplasm diversity. These further relate to food security concerns and food system vulnerability.

USDA (NIFA, ARS, Forest Service) has concurrently been creating a Roadmap for the federal agency. There is some recognition that significant resources have been invested into infrastructure (seed and germplasm repositories, laboratories, equipment, greenhouses and field stations) supported by federal funds (Hatch, Hatch Multistate) which are significantly leveraged by state Agricultural Experiment Station funds. In addition, state and national commodity organizations provide financial and programmatic support. Other organizations are also part of the conversation such as ASTA and NAPB (creating a new strategic plan). Recently, the NAREEE Board has been engaged in this priority dialogue. Dr. Ramaswamy has reached out to a select group of Directors, Executive Directors and selected USDA officials to broaden the conversation, enhance communications and create short- and long-term action outcomes.

The leaders of the Seeds and Breeds Coalition desire to initiate a focused conversation to discuss the current and future capacity of public breeding programs and explore the opportunities associated with these challenges with LGUs and, in particular, Experiment Station Directors.

Action Requested: Discussion/Creation of a small leadership group.

Agenda Brief
ESCOP Budget and Legislative Committee
Gary Thompson and Mike Harrington
For Information Only

The committee holds regular conference calls on the last Tuesday of each month that have generally been well attended. The current B&L Committee membership is shown below. Gary Thompson assumed the chair at the 2014 ESS meeting.

Chair: Gary Thompson (NERA)* Delegates: Barry Bequette (ARD) Carolyn Brooks (ED-ARD) Karen Plaut (NCRA) Ernie Minton NCRA Tim Phipps (NERA) Vacant (NERA) Bill Brown (SAAESD) Bob Shulstad (SAAESD) Jim Moyer (WAAESD) Jeff Steiner (WAAESD) Executive Vice-Chair Mike Harrington (WAAESD)	Liaisons Rick Klemme Chair ECOP BLC Paula Geiger (NIFA) Emir Albores (NIFA) Glen Hoffsis (APLU Vet Med) Eddie Gouge (APLU) Ian Maw (APLU) Dina Chacon-Reitzel (CARET) Cheryl Achterberg (APLU - BoHS) Jim Richards (Cornerstone) Hunt Shipman (Cornerstone) Vernie Hubert (Cornerstone) Chair elect –TBD, SAAESD
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ROI White Paper: Previously The ESCOP and ECOP Budget and Legislative Committees agreed to work on the development of a white paper that would demonstrate the return on investment (ROI) of public investments in the AES and CES systems. In conjunction with Mike Hoffman and Daryl Buchholtz, Robin Shepard and Mike Harrington worked on the outline that was approved by both B&L Committees at the J-COPs meeting in Manhattan.

In early September 2014, the Executive Directors assembled a response to questions from Noah Engelberg at OMB. The questions were: *1) What is the appropriate mix of competitive and formula funds? and 2) How can performance on individual projects be improved?* That response addressed many of the points in the outline and could serve as an initial starting point to develop a finalized document. Robin and Mike are again working with the respective committees to create a draft document that captures the value of what we do. Included here is a draft of the white paper that still needs Extension input. It is anticipated that a one page executive summary from the larger document would be finalized in time for the AHS-CARET meeting.

The Land Grant system - Meeting Current and future challenges

The history of the land grant colleges is generally well known, from first the Land-grant Morrill Act (1862) providing for practical higher education in agriculture and the mechanical arts to the second Morrill Act, (1890) which provided Land-grant status to the historically black institutions. Later on, other colleges including University of the District of Columbia and the "1994 Land-grant colleges" for Native Americans were also awarded "Land-grant" status. The Hatch Act of 1887 provided federal funds to states to establish agricultural experiment stations with a mission of developing new information (i.e. conduct research). The outreach mission included in the Smith-Lever Act of 1914, creating the Cooperative Extension Service, which placed agents into rural areas to bring the results of research to the end users. Each Land-grant college receives an annual Federal appropriation for research and extension work on the condition that those funds are at least matched 1:1 by state or local funds.

Today's Land-grant University is a very comprehensive institution and Colleges of Agriculture (or expanded title) therein have multiple departments with research and teaching faculty serving more than 160,000 undergraduate and some 30,000 graduate students each year and through Extension, maintain outreach efforts in more than 3,400 counties in the U.S.

The Nation's Agriculture Experiment Stations and Cooperative Extension work hand-in-hand to assure community-based engagement informs relevant science, research results get generated in a timely fashion, so that practices can be improved. This iterative process is where true innovation occurs and requires both competitive and capacity funding for rapid responses and long-term research and education. Research and Extension have national representative leadership committees on organization and policy that define national priorities. See <http://escop.ncsu.edu/docs/scienceroadmap.pdf> for ESCOP's *A Science Roadmap for Food and Agriculture* and <https://www.aplu.org/document.doc?id=4096> for ECOP's *Cooperative Extension Strategic Opportunities*. Underscoring the strong alignment of research and Extension at state and local levels, the two documents, developed through separate processes, show a striking alignment.

Funding for Capacity Programs has declined: The formula funds are now termed capacity funds because they provide critical infrastructure at State Agriculture Experiment Stations and for Cooperative Extension that facilitate the success of the U.S. agriculture system. While there have been small increases in the competitive funding area , according to USDA-NIFA data, capacity fund programs have lost as much as 40% in buying power over the last 20 years (Figure 1). Simply put the same or new innovation services cannot be provided with fewer funds.

The top federal funding priority for State Agricultural Experiment Stations and Cooperative Extension organizations is maintaining steady increases in capacity funds, ideally at least recovering lost buying power. There are few other federal programs where limited funds have been leveraged at least five to six times with state funds annually over a period of decades, in this case to yield ongoing positive impacts on the nation's food and fiber system, as well as related issues such as alternative fuels, environmental sustainability, economic development, and health and well-being of our citizens in both urban and rural settings.

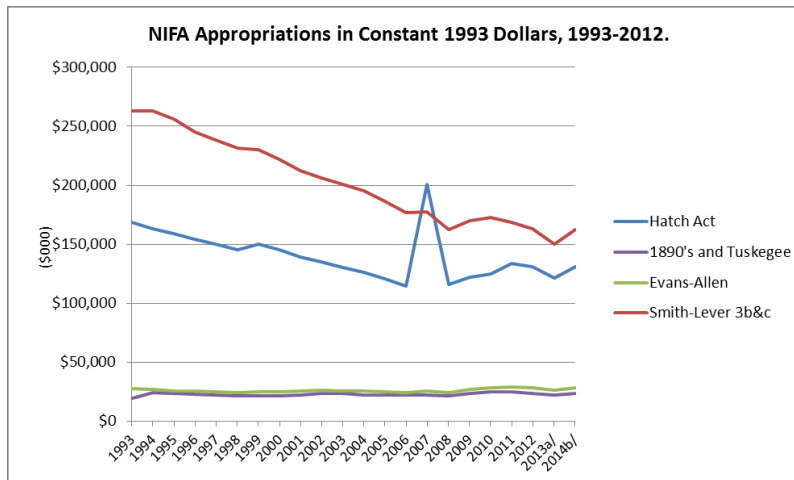


Figure 1 (Data provided by NIFA, constant 1993 dollars)

More Competitive Funding Is Needed: The most recent AFRI Annual Synopsis for 2010 indicates that there were over *\$2.6 billion* in highly meritorious proposals that would have been awarded if funds were available. Unfortunately, only 403 proposals could be funded from the available \$232,649,478. Inadequate funding of NIFA competitive and capacity programs jeopardizes the world’s most productive and successful Agricultural Research and Cooperative Extension system.

The value of the capacity funding mechanism has been questioned by the Administration, through the Office of Management and Budget and others who assert that, *“The best science results from externally funded competitive programs.”* This premise assumes that competitive programs provide the best outcomes, but there is little hard evidence to support this assumption. Huffman and Evenson observed in their paper¹, that as increases occur in the share of State Agricultural Experiment Station funding from federal contracts, grants, and cooperative agreements (not limited to USDA), the impact of public sector agricultural research on state agricultural productivity declines. Huffington and Evenson, 2006, noted that *“each unit of Hatch formula funding of SAES research had a larger impact on local agricultural productivity than a similar unit of federal competitive funding.”* These authors maintain that between 1970 and 2004 the marginal real rate of return was approximately 50% annually on Hatch and Smith Lever formula funds². More conservative estimates place return at 20% annually.

SELECTED OUTCOMES FROM FORMULA FUND INVESTMENTS

Significant efforts have been made to collect information on project and programs outcomes via federally required State Plan of Work that integrates experiment station and Extension activities and

¹ *New Economic Evidence on Agricultural Total Factor Productivity Determinants: Impact of Funding Compositions*, [August, 2005](#)

² Huffman, Norton et al. Investing in a Better Future through Public Agricultural Research. CAST Commentary QTA 2011-1, March 2011)

state annual reports thereon. Individual faculty members must also report on Hatch projects as well. Newly initiated efforts are collecting specific information on individual project and program outcomes.

Extension Outcomes (5 stories)

Research Outcomes (Hatch, Evans Allen and State Funds) (5 stories)

Wastewater Treatment System Saves Turkey Processor Millions, Protects Environment: Wastewater from food processing plants is often pre-treated at considerable expense before it is sent to municipal wastewater treatment plants causing environmental concerns. The Ohio Agriculture Research and Development Center (OARD) agricultural engineers have developed treatment system for turkey slaughterhouse wastewater. The four-acre sand and gravel bioreactor, the first of its kind, treats the wastewater from 7,000 processed birds per day achieving 99% BOD (biological oxygen demand) removal and 53-85% ammonia removal. The treated water runs clear. The bioreactor cost is estimated to be \$2.8 million over 20 years saving the owner about \$10 million from the proposed alternatives. The new bioreactor plant went online in August 2012 and

Hypoallergenic Peanuts: The prevalence of peanut allergy in the U.S. population ranges from 0.6 percent to 1.3 percent (2-4 million people) and this allergy is rarely outgrown. Scientists in the Food and Nutritional Sciences Program at North Carolina Agricultural and Technical State University have developed a safe, relatively simple technology for deactivating/reducing the allergenic proteins in whole roasted peanuts by up to 98%.

Integrated Research and Extension

Economic Development: The Arkansas Division of Agriculture's Breakthrough Solutions Community and Economic Development team and 18 partner organizations help communities build the basis for a vibrant and prosperous future. Harrison, the pilot community, reported a net increase of 35 new businesses from 2009 through the 2012.

Multistate Research Program (reduce to 5-6 stories)

The Agriculture Experiment Stations support nearly 300 multistate projects ([See NIMSS](#)) many of which are integrated with Extension and academic programs. In addition to providing critical support for faculty and technicians, many of these projects also support both graduate and undergraduate students. These regionally and national peer reviewed projects typically involve scientists from all regions, ARS, ERS, etc. and are consistent with the USDA Goals as well as ESCOP's Science Roadmap for Agriculture. Support for these projects comes primarily from Hatch Multistate but also includes Hatch, McIntire Stennis, State Matching and, where appropriate, Evans-Allen Research as well as Smith-Lever and other Extension capacity funding when integrated with Extension (ERA designation). The State Agricultural Experiment Stations also support peer reviewed [National Research Support Projects](#) (NRSPs) that

provide crucial data which enables/facilitates research by agricultural and other scientists nationwide. The Agriculture Experiment Stations currently invest \$1.231 million in 7 NRSPs that have leveraged over \$30.6 million in other funding.

Together these projects result in savings of several hundreds of million dollars annually to the \$225 Billion U.S. agriculture industry as well as significant leveraging of capacity and state dollars in the form of grants and contracts from the USDA-NIFA Agriculture and Food Research Initiative (AFRI), NIH, NSF, DOE, DOD, NASA, commodity groups, foundations and other sources.

Additional outcomes can be found in the Impact Reports on multistate projects that are assimilated at the end of the project period. (See: [2011 Impact Statement Catalogue](#), and [2012 Impact Statement Catalogue](#))

Rural Population Change (W-2001) has provided data and insights on demographic trends in rural areas that are essential for plans, programs, and policies that support sustainable rural communities and promote residents' quality of life. This research has helped public policy makers and rural residents design or modify programs, so that they address important issues and are adapted to current and projected rural population trends. Federal, state, and local decision-makers have been empowered to compare situations and learn from each other's experiences.

Personal Protective Technologies (NC-170) has improved textiles and personal protective garments (PPE) for workers in hazardous occupations, leading to better safety and job performance. Specific outcomes include: improved protection from dangerous chemicals and pathogens by developing self-decontaminating materials for industrial workers, first responders, public health workers, and military personnel (the design of body armor that has been adopted by the U.S. Marine Corps) and ensure a baseline level of protection for workers by setting standard performance specifications for PPE sold in the U.S. This national project has improved tools and methods for testing PPE performance.

Preventing Obesity in High Risk Families (W1005) has advanced the science of child obesity prevention, particularly about parenting, energy dynamics, and lifestyle factors. By focusing on these factors, child obesity prevention programs can be more effective in family and community settings.

Management of Small Grain Diseases (NCERA-184) has improved monitoring and management of diseases in small grains, thus preventing millions of dollars in losses due to poor grain yield and quality and assuring an ample supply of grain for consumption and other uses in the U.S. and with U.S. commodities traded globally. Research results have provided information about Fusarium Head Blight to thousands of farmers in 30 states, helping prevent serious outbreaks resulting in savings of \$47 million per year.

Emerging Soybean Rust Threat (NCERA-208) alerted the soybean industry when and where soybean rust (SBR) was detected, thus saving North American soybean producers over \$600 million in unnecessary fungicide costs), reducing chemical exposure to the environment and food supply, and diminishing apprehension among the soybean industry.

Regulating Photosynthesis (NC-1168) has made significant strides in identifying genetic mechanisms that increase resistance to salt, heat and water stress, reducing crop loss and costs and advancing strategies to maintain plant yields under climate change. They have also discovered ways to regulate gene expression during photosynthesis, enabling scientists to modify crop genetics without introducing foreign genes, thus relieving many consumer concerns about genetically engineered plants.

Bioactive Dietary Chemicals (W-2122) advanced our understanding of bioactive dietary chemicals that can be either beneficial or harmful to human health, thus identifying ways to improve food safety, prevent common diseases, and ensure that consumers have a healthy food supply. Research results have helped consumers make more informed, healthier choices about whether to take dietary supplements. For example, researchers found that the estrogen-like compounds (isoflavones) in some soy supplements can stimulate growth of estrogen-dependent breast cancer and can negate the effectiveness of breast cancer therapies. In addition, outcomes have improved food safety by identifying how to prevent contamination from food-borne toxins during processing, preparation, and other post-harvest activities

Nutrient Analyses (SERA-006) of plant and soil has promoted accurate, unbiased procedures for nutrient analyses, facilitating better nutrient management that ensures the sustainability of agricultural production and natural resource stewardship in the southern U.S. The project also reduced over application of nutrients, saving producers tens of millions of dollars and protecting surface waters and groundwater from potential contamination.

Biological Control of Pests in Plant Systems (W2185) provided successful, cost effective, and sustainable pest control in agricultural and natural settings by releasing, manipulating, and conserving the predators, parasites, and pathogens that attack harmful insect and weed pests. From 2007 through 2010, property owners/managers in the northwestern U.S. saved an estimated \$500,000; in 2011 alone, they saved \$250,000 by biologically controlling weeds. Over the last 16 years, an IPM program that incorporates natural enemy conservation saved Arizona cotton growers \$388 million by reducing crop loss and chemical pesticide use.

Biological Improvement of Chestnut (NE1333) has focused on the important goal of restoring the American chestnut, previously one of the most valuable trees in eastern North American forests. Some of the many outcomes of this project has been the development of (1) new blight resistant chestnut cultivars as both timber crops and orchard trees for nuts; (2) new strategies for planting chestnuts in harvested and disturbed ecosystems; (3) biocontrol viruses that provide more options for controlling pests and diseases of chestnut trees; and (4) an aggressive program to reintroduce domestically grown chestnuts as a diversely used food source for common consumption.

Enabling Pesticide Registrations for Specialty Crops and Minor Uses (NRSP4 or IR-4) has been the primary entity in the United States to facilitate registrations of pesticides and biopesticides on specialty food crops and non-food ornamental horticulture crops. The IR-4 Project research data facilitated nearly 16,000 food crop registrations and an additional 160 product registrations impacting nearly 31,000 ornamental crop uses. IR-4 contributes an estimated \$7.2 billion to U.S. Gross Domestic Product and the Program supports nearly 105,600 jobs³.

³ Miller, S.R. and A. Leschewski (2011). Economic Impacts of the IR-4 Project and IR-4 Project Programs. East Lansing, MI: Michigan State University's Center for Economic Analysis.

Agenda Item: March ESCOP Meeting

Presenters: Bob Shulstad and Eric Young

Background:

ESCOP will meet next during the CARET/AHS Meeting, which is March 2 – 5, 2015, in Washington, DC. The CARET/AHS Meeting will begin on Monday instead of Sunday, as it has in the past. Due to this change, ESCOP can meet either Monday afternoon, March 2 from 1:45 – 5:00 or Tuesday morning March 3 from 8:00 – 11:45. Below is the tentative CARET/AHS general schedule for Monday and Tuesday.

Monday, March 2, 2015

8:00 - Noon CARET Executive Committee Business Meeting

Noon - 1:30 p.m. CARET Executive Committee Lunch with New CARET Delegates

1:45 – 2:45 p.m. Justin Morrill: Land for Learning video

3:00 – 3:30 p.m. Break

3:30 - 5:00 p.m. New CARET Delegates/New Dean Orientation

6:00 - 7:30 p.m. Welcome Reception

Tuesday, March 3, 2015

7:00 - 8:00 a.m. Breakfast

8:00 - 11:45 a.m. CARET'S Leadership Institute

Noon - 1:30 p.m. Lunch

1:45 – 5:00 p.m. Advocacy Preparation

Action Requested: Decide whether to meet on Monday afternoon or Tuesday morning.