



## North Central Regional Association of State Agricultural Experiment Station Directors

211<sup>th</sup> Meeting

The Chase Park Plaza, Royal Sonesta Hotel

St. Louis, MO

April 2-4, 2018

Final AGENDA and [MINUTES here](#)

Date/Time	Agenda Item	Topic	Presenter
<b>Monday, April 2: Ogle Boardroom</b>			
2:00-5:00 pm		Multistate Research Committee (MRC) Meeting (for MRC members only, although others are welcome to attend if interested). <ul style="list-style-type: none"> <li>New/renewal multistate proposals</li> <li>Midterm reviews</li> <li>NC Multistate Research Award</li> <li>NRSP report</li> <li>Multistate Projects - Reimagined</li> </ul>	Greg Cuomo, MRC Chair 2018
5:30 pm	<i>Dinner on your own; perhaps meet in the lobby to make joint plans</i>		
<b>Tuesday, April 3: Maryland Room</b>			
7:30 am	<i>Breakfast provided in meeting room</i>		
8:00 am	1.0	Call to Order and Introductions	Joe Colletti, NCRA 2018 Chair
	2.0	Approval of September 2017 Minutes: ( <a href="https://www.ncra-saes.org/agendas-minutes">https://www.ncra-saes.org/agendas-minutes</a> )	
	3.0	Adoption of the Agenda	
	4.0	Interim Actions of the Chair 4.1 NCRA Nomination for ESS Leadership Award <a href="#">4.2</a> NCRA FY2019 Office Budget	Joe Colletti
8:20 am	5.0	NCRA Office Update <a href="#">5.1</a> Activities and Accomplishments <a href="#">5.2</a> NRSP1 Update <a href="#">5.3</a> National Impact Database Update	Jeff Jacobsen, Chris Hamilton
8:55 am	6.0	USDA Blueprint - Livestock Genome to Phenome	Archie Clutter
9:10 am	<a href="#">7.0</a>	1994s Discussion Topic	Gary Halvorson, Jeff Jacobsen
9:40 am	8.0	NIFA Update	Parag Chitnis
10:00 am	<i>Break</i>		
10:30 am	<a href="#">9.0</a>	ARS Update	JL Willett
11:00 am	10.0	Spousal/Partner Accommodations: Best Practices	Bill Barker, All
12:00 pm	<i>Lunch provided: Waterman Room</i>		
1:00 pm	11.0	Cornerstone Update	Hunt Shipman, via Zoom

1:30 pm	12.0	1890s Discussion Topic	John Yang, Yvonne Matthews (Lincoln University)
2:00 pm	13.0	Protein Highway Update	Greg Cuomo
2:15 pm	<a href="#">14.0</a>	MRC Report and Recommendations <ul style="list-style-type: none"> <li>• New/renewal multistate proposals</li> <li>• Midterm reviews</li> <li>• NC Multistate Research Award Nominee</li> <li>• <a href="#">NRSP Summary Table</a></li> <li>• Multistate Projects - Reimagined</li> </ul>	Greg Cuomo, 2018 MRC Chair  Doug Buhler, NRSP-RC Rep Greg Cuomo, Jeff Jacobsen
2:30 pm	<i>Break, as needed</i>		
3:00 pm	<a href="#">15.0</a>	NCRA IDI Survey De-brief and Discussion	Patreese Ingram, Pamala Morris, via Zoom
4:00 pm	16.0	ESS/AES/ARD Meeting and Workshop Update	Deb Hamernik, ESCOP Chair-elect
4:15 pm	17.0	Other business 17.1 NCRA Spring Meeting 2019 location discussion 17.2 <a href="#">ESCOP Standing Committee Reports</a> (as needed) 17.3 <a href="#">NCRCRD Update</a>	Joe Colletti, Chris Hamilton  Mark Skidmore
4:30 pm	18.0	FFAR Update	Doug Buhler
4:45 pm	19.0	Executive Session	NCRA Directors Only
<i>Meeting Adjourns, Dinner on your own (meeting in lobby to make group plans as desired)</i>			
<b>Wednesday, April 4</b>			
6:30 am	<i>Breakfast provided in the Plaza Room</i>		
7:30 am	Meet in Lobby to depart for United Soybean Board, National Corn Growers Association, Monsanto, and Danforth Plant Science Center. <a href="#">Tour schedule here.</a>		
2:00 pm	<i>Tours conclude at 2 pm, depart on your own</i>		

#### Future Meetings:

- National Extension and Research Administrators Conference (NERAOC), Amway Grand Plaza, Grand Rapids, MI, April 22-25, 2018.
- NC Summer Mini Land Grant Meeting/CARET-AHS Summer Session, Fargo, ND, July 22-24, 2018
- Fall ESS/AES/ARD Meeting and Workshop, Lincoln, NE, October 1-3, 2018
- APLU Annual Meeting, New Orleans, LA, November 11-13, 2018

## Written Reports:

- [MRC Detailed Review Table](#)
- ESCOP Reports from March CARET/AHS Sessions:
  - [Budget & Legislative](#)
  - [Science & Technology](#)
  - [Communications & Marketing](#)
  - [Diversity Catalyst Committee](#)
  - [Policy Board of Directors \(PBD\)](#)
  - [ESCOP Website](#)
  - [COGR Hemp Draft Letter](#)

**Meeting MINUTES**  
**NCRA Spring Business Meeting, April 3, 2018**

Item #	Notes	Action Taken
2.0	September 2018 Minutes	Minutes Approved
3.0	Today's (4/3/2018) Agenda Approval	Agenda Approved
4.1	NC Nominee to ESS Leadership Award – Doug Buhler	Doug Buhler unanimously approved as our NC Excellence in Leadership Award winner!
5.3	<p>TAMU National Impacts Database Update:</p> <ul style="list-style-type: none"> <li>• Website being updated currently and will include analytics.</li> <li>• Range of quality exists for impacts submitted to the database, so a new review process that includes a need for regional reviewers (likely our communications/evaluations experts) to serve on a panel has been suggested which needs regional feedback.</li> <li>• Need more information on the number of impacts submitted and information/analytics on how the site is used effectively before stations wish to commit to volunteering their communications people. This would include regional breakdowns, research/Extension and other, and over the course of inceptions of the Database.</li> <li>• Impact statements crafted that match our Cornerstone, CARET priorities and can be left with Congressional staffers, the press, and other stakeholders would be more valuable.</li> <li>• A thematic plan would be useful.</li> <li>• Perhaps submitted 2-3 impacts to post on the NCRA website would be just as effective.</li> <li>• The development of a compelling case for this effort which includes the connections to the multistate impact program, CMC and other relevant efforts of ESS.</li> </ul>	<p>The NCRA decided that we need more information from analytics on the database audience and how it's being used before being willing to invest the time of AES communications staff to join a review team. Jeff will communicate this need to the CMC/TAMU database team.</p>
7.0	<p>1994s Discussion Topic:</p> <ul style="list-style-type: none"> <li>• Best way to learn about Tribal Colleges is to go and visit them, learn about the people and culture directly.</li> <li>• An increase in research is occurring at 1994s, due to increased funding sources from the USDA, NSF, but it's been challenging since traditionally, their focus has been on teaching.</li> <li>• Sitting Bull College board of directors wanted to start a Master's program in environmental science, so the research program needed to grow. Graduates from that program have been very successful and are often hired quickly.</li> </ul>	<p>For information and discussion. Directors are encouraged to read the Summary of Activities (current) and ideas on Best Practices. Connect with Jeff as this is an ongoing effort. In addition, directors can reach out to Gary Halvorson and John Phillips to explore the establishment of collaborative relationships with 1994s and become involved with FALCON. Many opportunities exist with</p>

	<ul style="list-style-type: none"> <li>FALCON (First Americans LG Consortium) program brings together those working on LGU topics. 2017 had 175 participants, lots of interest and excitement exists for this organization. This year it will be in MSP, 11/3-11/5/2018. Wide spectrum of attendees allows for much in-depth conversation. Jeff will attend again this year. Mark Skidmore mentioned the partnership and matching program between 1994s and NCRCRD that was initiated last year. We should continue collaborating with such programs as we go into this year's FALCON meeting.</li> <li>IRB (Institutional Review Board) program issues persist at 1994s. Genetic studies, medicinal plant teaching programs/Big pharma issues have occurred that made 1994s realize they need to protect themselves. Turtle Mtn College established an IRB and received grant money to do so. For instance, no more surveys can be done without prior approval, due to the negative social concerns they were causing, especially related to obesity, poverty. Access to data and publications has been discussed.</li> <li>Many opportunities to partner with and establish relationships with 1994s exist, for both teaching and research. The summer Mini LGU meeting in ND may include this collaborative topic.</li> </ul>	<p>both research and teaching. Greg Cuomo, Ernie Minton and Jeff will reach out to John Phillips to explore NCRA-related engagement with the 2018 FALCON meeting in MSP. Joe Colletti will share some IRB-related materials from ISU for SBC.</p>
8.0	<p>NIFA Update:</p> <ul style="list-style-type: none"> <li>How do we highlight the importance of Capacity Programs?</li> <li>Showcase/market the system to show that it supports all of our ag research, through human capital, infrastructure, etc. We showcase our research impacts, but often don't link them to how these programs and projects are supported by Capacity. We need to do better with this to improve our chances to increase these necessary funds.</li> <li>Re-branding, maybe a more descriptive name change is needed to better describe the purpose of Capacity. People don't know what it means and perhaps it sounds like an entitlement.</li> </ul>	<p>For information only. We invite directors to consider how to better promote the utility of Capacity funds and programs.</p>
9.0	<p>ARS Update:</p> <ul style="list-style-type: none"> <li>JL Willett became the Area Director several months ago</li> <li>Updated ARS budget and detailed funding, vacancies included in <a href="#">ARS brief</a> below.</li> <li>The many leadership vacancies are affecting research programs, but they are getting ready to</li> </ul>	<p>For information only.</p>

	begin a strategic hiring plan. ARS hopes to work closely with AES as this process begins.	
10.0	<p>Spousal/Partner Accommodations: Best Practices</p> <ul style="list-style-type: none"> <li>• WI: hiring decisions are vested within departments, not dean's office. UW has a formal program called the Dual-Career Program that offers a year's salary from Provost's office. This program applies to significant other, doesn't need to be a formal spouse. The Dual-Career Couple Assistance Program is a partnership between the Office of the Provost, departments, deans and the broader campus community, and is designed to assist the spouse/partner of new faculty and academic staff members locate employment opportunities by offering networking and career resources. Positions are not guaranteed; they have to be a good fit. More info: <a href="https://facstaff.provost.wisc.edu/dual-career-couple-assistance-program/">https://facstaff.provost.wisc.edu/dual-career-couple-assistance-program/</a></li> <li>• Purdue: Provost provides significant funds for partner hires, up to \$300,000. Purdue's Concierge service, through HR, works to connect partner with community partner positions as well.</li> <li>• UMN: University has a supportive policy, but it can be challenging at the college level. They ask departments if they can offer a position, but it's not always possible.</li> <li>• MO: Support from Provost's office for salary exists if they can find an academic position. It's mostly conducted on a case by case basis. Limited/flat funding means every position is precious. The external community is small, so those positions may be limited.</li> <li>• NSDU: There is often push-back from departments when dual hires occur, departments have limited openings and want to only hire the best.</li> <li>• OSU: Similar to NDSU issue. Why do we do this? Industry does not and it causes consternation. The rest of group emphasized that we need to offer the best packages to be competitive with hiring.</li> <li>• IA: 25-50% of hires need partner accommodation. Provost gives 1/3 of salary for one year, renewable if successful. Often partners are hired as adjunct non-tenure eligible assistant professors first, then transition into tenure-eligible if they are performing well; a position is actually created for them quite often.</li> </ul>	For information and discussion.

	<ul style="list-style-type: none"> <li>• Hiring is competitive and we all need to lead with our best offers, which must include partner accommodations.</li> <li>• In some cases, these accommodations even apply to existing faculty as a retention effort. All efforts depend also on the “luminosity” of the original hire. In some cases, the trailing partner can even become the “star” hire.</li> <li>• IL: Similar to other systems, but department needs to be willing to hire and cover 1/3 of partner hire, indefinitely.</li> </ul>	
11.0	Hunt Shipman of Cornerstone joined via Zoom to give the group an update on the status of the federal budget and related activities. For more information on final numbers and detailed reports, please refer to their website at <a href="http://land-grant.org/">http://land-grant.org/</a>	For information only.
12.0	1890s Discussion Topic – Yvonne Matthews and John Yang gave informative updates on Extension and Research programs at Lincoln Univ. Slides attached at the end of our agenda briefs.	For information and discussion. Contact John Yang ( <a href="mailto:YangJ@lincolnu.edu">YangJ@lincolnu.edu</a> ) for more information on collaborative and complimentary programs with Lincoln Univ. Many opportunities exist.
13.0	Protein Highway Update – Started as a collaborative effort driven by Canadian consulate, Manitoba University, and NC region to think about and research alternative protein sources (small grains, lentils, pulses, etc.). Mostly a virtual partnership, but it’s unknown where the effort is going at this time.	Contact Greg for involvement, ideas for advancement.
14.0	<p>MRC Report and Recommendations:</p> <ul style="list-style-type: none"> <li>• Request to approve renewal/new project MRC recommendations, except for NC_temp3169 which was changed to approve pending minor revision.</li> <li>• Request to approve midterm review recommendations.</li> <li>• Request to approve the MRC’s choice of NCERA217 to go forward as our NC nominee to the National Excellence in Multistate Research Award</li> </ul>	<p>Approved. Chris will share these reviews with proposal AAs and writing teams within the next week or so.</p> <p>Approved.</p> <p>Approved. German Bollero will contact the NCERA217 lead and UIUC communications professional at IL for polishing of the nomination with Jeff and other members of the committee in advance of the S&amp;T final review and selection. Final submission due to S&amp;T (via Jeff and Chris) by May 23, 2018.</p>

	<ul style="list-style-type: none"> <li>• Recommendation to approve, for continuation, all NRSPs up for midterm review, NRSP4, NRSP6, and NRSP9. New NRSP8 proposal and budget recommendations: The MRC recommends the revision of NRSP_temp8’s budget (to match the proposal requirements) and revise narrative /objectives to clarify how SAES funds are supporting the stated mission of the NRSP program to facilitate research, rather than funding actual research and other committee activities.</li>   <li>• Reimagining multistate projects – Based on conversations at the CARET/AHS meeting last month, several members discussed the fact that we have a very complicated, labor intensive multistate system. Does it actually meet our federal requirements and overall goals as a research enterprise? Should we consider re-evaluating how we conduct multistate activities? Group discussion ensued on the issue. <ul style="list-style-type: none"> <li>○ They do help showcase Capacity impacts for NIFA</li> <li>○ Many research projects don’t get any funding at the state level, very variable across states. However, AFRI coordination funds are available, but not being used</li> <li>○ Many do not function as true multistate collaborations or at least their reports do not show this</li> <li>○ They do provide a formal platform to get faculty together and share information</li> <li>○ What would our metrics be if we decide to reimagine the program?</li> <li>○ We must clearly think about the rationale behind the program, expectations, and who the impacts need to reach.</li> <li>○ Research projects provide a good way to track Hatch spending, meeting the 25% integration requirement and show multistate efforts. Also beneficial for new faculty to network and gain leadership opportunities</li> <li>○ To ponder: What happens if we don’t make updates to this system?</li> <li>○ Interested in serving on a temporary committee to reimagine the NC multistate program: Jane, Dave, Bill, Deb, Tim, George, Marc</li> </ul> </li> </ul>	<p>NRSP MRC recommendations approved. Jeff and Chris will communicate this recommendation to the NRSP-RC.</p> <p>Jane, Dave, Bill, Deb, Tim (NIFA), Marc and George are interested in forming an ad hoc committee to re-evaluate the NC multistate committee. Jeff/Chris will be in touch to schedule Zoom calls on the topic.</p>
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	<ul style="list-style-type: none"> <li>• The MRC recommends Jane Schuh be added as a new MRC member starting 10/1/2018.</li> <li>• NERA Memo Discussion: <ul style="list-style-type: none"> <li>○ MRC agreed that we should consider an expert, external peer reviews for midterms</li> <li>○ Each NRSP should be reviewed on their own merit, we do not agree with sun-setting all NRSPs across the board as NERA suggests.</li> </ul> </li> </ul>	<p>Approved.</p> <p>Please send Doug or Jeff any additional NRSP comments or questions prior to the NRSP-RC meets.</p>
15.0	<p>NCRA IDI Survey De-brief and Discussion: Pamala Morris and Patreese Ingram joined via Zoom to discuss the national and regional IDI summaries, as well as provided many ideas for members to advance on the cultural competency continuum. Slides from their presentations can be found at the end of the NCRA meeting briefs.</p>	<p>For information, group discussion, and individual consideration. Pamala and Patreese re-invited the group to take the IDI assessment and schedule individual de-briefs with them. Jeff will extend an invitation to the new NCRA attendees.</p>
16.0	<p>Fall ESS Meeting Update:</p> <ul style="list-style-type: none"> <li>• Lincoln, NE Embassy Suites</li> <li>• Dates: 10/1/ to 10/3/2018</li> <li>• Some tours will be available on 10/1 before 1 pm</li> <li>• 10/2 will be a full day meeting with a variety of sessions in progress on public/private partnerships, Unifying Message panel, diversity and inclusion interactive session. Planning committee is hard at work on finalizing topics and setting these up</li> <li>• 10/3 will have one morning session, might be new NIFA director or non-traditional funding options, followed by the ESS business meeting. End early afternoon on 10/3.</li> <li>• Registration site will be up in a couple of months.</li> </ul>	<p>For information only.</p>
17.0	<p>17.1: Spring meeting 2019 location:</p> <ul style="list-style-type: none"> <li>• Phoenix, AZ was identified as our first choice. Chris and Jeff will work on more details and get back in touch with the group.</li> </ul> <p>17.2: ESCOP Standing Committee Updates:</p> <ul style="list-style-type: none"> <li>• B&amp;L: Ernie has moved into the chair role for B&amp;L. Shawn Donkin volunteered to serve as our new NCRA rep. Ernie is also leading a strategic realignment committee. Please send Ernie any suggestions you may have on line consolidation.</li> </ul>	<p>Chris and Jeff will work on more details and get back in touch with the group.</p> <p>Shawn Donkin was approved as our second NCRA rep to B&amp;L. Chris informed Mike and Sarah about this update to B&amp;L Membership via email on 4/3.</p>

	<p>The goal is to have some preliminary thoughts by Joint COPs.</p> <ul style="list-style-type: none"> <li>• S&amp;T: FYI only, Laura should be listed as WAAESD, Chair not for ARD. The error has been corrected in the below agenda brief.</li> </ul> <p>17.3: NCRCRD Update: Mark Skidmore briefly highlighted important topics in the <a href="#">NCRCRD</a> brief below.</p>	For information only.
18.0	<p>FFAR Update:</p> <ul style="list-style-type: none"> <li>• Webinar happening on Thursday, 4/5 giving an update on FFAR. Check out the website as well for new funding and activities.</li> <li>• It's taken time, but many excellent grants have gone out, supporting a variety of projects consistent with the program.</li> <li>• Awards have been a successful addition to FFAR, as well.</li> <li>• Continue to need clarification on the matching requirement, which poses challenges to many institutions.</li> <li>• A push for additional funding into FFAR is occurring since a new Farm Bill is in the works.</li> </ul>	For information only.
19.0	<i>General NCRA business meeting adjourned at 4:50 pm CT.</i>	

### **NCRA Tour Schedule for April 4, 2018**

- 6:30 am Breakfast provided in The Plaza Room
- 7:25 am Depart Hotel for Chesterfield Valley
- 7:30 am – 8:00 am Travel to United Soybean Board [16305 Swingley Ridge Rd, Suite 150, Chesterfield MO 63017]
- 8:00 am – 8:30 am Visit United Soybean Board
- 8:30 am – 8:45 am Travel to National Corn Growers Association [632 Cepi Drive, Chesterfield MO 63005]
- 8:45 am – 9:15 am Visit National Corn Growers Association
- 9:15 am – 9:30 am Travel to Monsanto Chesterfield Valley Campus [700 Chesterfield Parkway West, Chesterfield MO 63017]
- 9:30 – 9:45 am Sign in at Monsanto and receive entry badges
- 9:45 – 10:30 am Introductions, Monsanto Speaker or Q/A Panel
- 10:30 am – 11:50 am Monsanto CV Campus Tour
- 11:50 am – 12:30 pm Lunch provided at CV Campus by Monsanto – conversation
- 12:30 pm – 1:00 pm Travel to Danforth Center [975 North Warson Road, St Louis MO 63132]
- 1:00 pm – 1:45 pm Tour Danforth Center Facilities/Scientist Interaction
- 1:45 pm – 2:00 pm Conversation with Janet Wilding, 39N Development [meet with her at Danforth Center]
- 2:00 pm Adjourn

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Item 4.2: NCRA Office Budget, Working FY18 as of February 2018 and Proposed FY19

Presenter: Joe Colletti

Action Requested: For discussion and approval during NCRA Executive Session

<b>NCRA FY2018/19 Working Budget</b>				
<b>INCOME</b>				
	<u>FY2017</u>	<u>FY2018</u>		<u>FY2019</u>
Description	Final	Budget	YTD***	Budget
State Assessments	425,763	425,763	425,761	425,763
Account Carryover (MSU)		43,435	43,435	43,647
<b>TOTAL INCOME</b>	<b>425,763</b>	<b>469,198</b>	<b>469,196</b>	<b>469,410</b>
<b>EXPENSE</b>				
	<u>FY2017</u>	<u>FY2018</u>		<u>FY2019</u>
Description	Final	Budget	YTD***	Budget
<b>NCRA</b>				
Regional Initiatives*****	-	-	5,000	
			(5,000)	
<b>NCRA Subtotal</b>	<b>-</b>	<b>-</b>	<b>-</b>	
<b>MICHIGAN STATE</b>				
Executive Director Salary	196,000	205,000	205,000	205,000
Fringe*	51,156	53,505	53,505	53,505
Office Operating	3,885	3,000	1,739	3,000
Travel	31,781	30,000	18,913	35,000
Training	60	-	-	-
MSU Administrative/Service Fees (2% MSU)****	5,603	5,830	5,830	5,930
<b>MSU Subtotal</b>	<b>288,485</b>	<b>297,335</b>	<b>284,987</b>	<b>302,435</b>
<b>U of WISCONSIN</b>				
Assistant Director Salary	72,255	79,480	79,480	79,480
Fringe**	30,675	34,462	34,462	34,462
Office Operating	1,258	3,000	2,214	3,000
Travel	9,852	8,000	2,784	12,000
Training	380	500	320	500
Meeting Support	1,756	2,000	-	2,000
UW Administrative/Service Fees (2% CALS, 5% UW)	-	-	8,486	9,341
<b>UW Subtotal</b>	<b>116,176</b>	<b>127,442</b>	<b>127,747</b>	<b>140,783</b>
<b>TOTAL EXPENSE</b>	<b>404,661</b>	<b>424,778</b>	<b>412,734</b>	<b>443,218</b>
<b>BALANCE</b>	<b>21,102</b>	<b>44,420</b>	<b>56,462</b>	<b>26,192</b>
*MSU FY18 fringe: 26.1%.				
**UW FY18 est. fringe: approx 42% + term leave fee of \$23.84/month.				
***Full FY expenditures for salary + fringe + MSU admin fees, YTD actuals, for other categories.				
****Still awaiting final MSU FY2017 close-out admin fees.				
*****Bt Corn Video (invoice = expense).				

### NCRA Accounts at MSU and UW

Account at MSU	FY17	FY18	FY19
MSU Starting Balance	17,371	43,435	43,647
MSU Income	425,763	425,763	425,763
MSU Budgeted Expenses	288,485	297,335	302,435
MSU Budgeted Expenses + UW invoice	405,072	425,551	430,651
Estimated MSU Ending Balance/Carryover	38,062	43,647	38,760
Actual MSU Ending Balance/Carryover**	43,435	tbd	tbd
Account at UW	FY17	FY18	FY19
UW Starting Balance	(1,184)	(773)	-
UW Income	-	-	-
UW Expenses	116,176	127,442	140,783
Actual UW Ending Balance/Carryover		-	
<i>UW Operating Reserve (3 mo)</i>	25,000	25,000	25,000
<i>Estimated UW Invoice to MSU*</i>	115,602	128,215	
<i>Actual UW Invoice to MSU</i>	116,587	tbd	
<p>*UW will invoice MSU mid-quarter for actual expenses (\$31,861 in August 2017; \$31,861 in November 2017; \$31,861 February 2018, and ??? in May 2018 to cover final 2018 expenses).</p> <p>**Includes budgeted FY17 MSU admin fees, which haven't been closed out yet.</p>			

### NCRA Assessment Distribution by State

State	60% State Equal Share Assessments	40% Proportional to State's Share of MRF*		FY18 Assessment	PROPOSED FY19 Assessment
Illinois	\$21,288	9.88%	\$16,826	\$38,080	<b>\$38,114</b>
Indiana	\$21,288	8.33%	\$14,181	\$35,440	<b>\$35,469</b>
Iowa	\$21,288	10.38%	\$17,672	\$39,255	<b>\$38,960</b>
Kansas	\$21,288	7.66%	\$13,038	\$34,299	<b>\$34,326</b>
Michigan	\$21,288	8.77%	\$14,932	\$36,190	<b>\$36,220</b>
Minnesota	\$21,288	8.74%	\$14,881	\$36,139	<b>\$36,169</b>
Missouri	\$21,288	7.81%	\$13,294	\$34,555	<b>\$34,582</b>
Nebraska	\$21,288	8.86%	\$15,085	\$36,343	<b>\$36,374</b>
North Dakota	\$21,288	5.87%	\$10,005	\$31,285	<b>\$31,293</b>
Ohio	\$21,288	9.47%	\$16,126	\$37,382	<b>\$37,414</b>
South Dakota	\$21,288	5.93%	\$10,102	\$31,370	<b>\$31,391</b>
Wisconsin	\$21,288	8.32%	\$14,164	\$35,423	<b>\$35,452</b>

<b>TOTAL</b>	<b>\$255,458</b>	<b>100.00%</b>	<b>\$170,305</b>	<b>\$425,763</b>	<b>\$425,763</b>
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\*Proportion of State share of MRF based upon rolling 3-year actual average (FFY15-17) as provided by NIFA. NRSP and NC off-the-top allocations (IL, IA, MI, NE, WI) not included.

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## Item 5.1: NCRA Office Activities and Accomplishments

Presenters: Jeff Jacobsen, Chris Hamilton

Action Requested: For discussion and evaluation during NCRA Executive Session

### 2017-2018 Summary of Activities and Accomplishments

Jeff Jacobsen, NCRA Executive Director

1. **NCRA ACTIVITIES** (Chris is a component of numerous activities)
  - Participate in the monthly Executive Committee calls. Frequent calls, Zoom meetings and emails with Chris. Monthly reports by the MSU financial staff enable the AD and ED to reconcile the budget across the NCRA accounts. We developed the three NCRA meeting Agendas and the NCRA FY2019 budget which were vetted through the Executive Committee.
  - Explore opportunities and participate with the US/Canadian Protein Highway scoping and branding effort as an innovation corridor. This effort is led by the Consulate General of Canada and the private sectors in Canada. Five NC states (IA, ND, NE, MN, SD) plus Montana and three Provinces are involved. My engagement has been sporadic due to conflicting events. (Greg Cuomo and Bill Gibbons have attended meetings).
  - Integrated elements of the NCRA Plan in regular meetings and future activities.
  - Participated with the MRC, NCRA multistate research award, NCRA Leadership award reviews and selection. Provided NCRA feedback through the MRC Chair to unsuccessful nominations and created a NCRA Certificate Award for our top multistate project. Worked with a state-level communications expert to refine the NC multistate research award nomination to be more competitive nationally. NC-1186 Water Management and Quality for Ornamental Crop Production and Health was the 2017 National Award winner!
  - Multistate Committees -- NCAC-1 Crop and Soil Research, NERA-222 Integrated Pest Management, NC1187 The Chemical and Physical Nature of Particulate Matter Affecting, Air Water and Soil Quality, National Multistate Coordinating Committee member and NCRA Multistate Review Committee (MRC). NC AES position on the NC Aquaculture Center.
  - NRSP1 as NCRA representative and lead AA. Chris Hamilton is the NIMSS lead. Served as background support with the NIMSS redesign with NCRA AD and WAAESD AD as the technical leads, trainers and primary interface with Clemson ITT. Worked with Chris and Sarah specifically, and the NRSP1 AAs and management committee on the renewal of NRSP1. Managed the external review and project response processes resulting in submission to the regions for spring meeting discussions. Managed the process through to the Fall ESS vote.
  - Reviewed preproposals and participate with the NC Sun Grant Program.
  - Maintain regular contact with the North Central Water Network.
  - Worked on the NC Boot Camp Planning Committee and subgroups for the 2017 training. This is a joint AES/CES program. AES participants include: Ernie Minton, CY Wang, Steve Slack and Chris Hamilton. Planning has begun for the 2018 session.
  - Initiated exploratory discussions with NC 1994 LGUs to learn about their teaching, research and Extension programs, past experiences with 1862 institutions and state/federal agencies. Initial site visits to United Tribes Technical College (ND), Sitting Bull College (ND), Bay Mills Community College (MI) with future visits to College of Menominee Nation (WI) and Lac Courte Oreilles Ojibwa Community College (WI); participated in 2017 FALCON conference. Written summary provided to NCRA for Spring 2018 meeting.
  - Support the North Central director (Deb Hamernik) as Incoming Chair and ESS Chair, 2018-2019 with Chris Hamilton.

## 2. NATIONAL ACTIVITIES

- Tribal Extension Capacity and Special Emphasis Programs, NIFA Panel Manager.
- Tribal Research Program, NIFA Panel Member.
- National Research Support Program Review (NRSP) Committee.
- Serve the ESCOP S&T Committee as Executive Vice-chair, and with the AD's support and engagement, provide administrative leadership and assistance. Identify and review materials and actions on behalf of ESS and provide narrative for committee recommendations to ESCOP. Facilitate the review and recommendation on the multistate research nomination process. Discussions occur during the monthly calls.
  - Formal recognition of the Multistate Research Project Award and the ESS Leadership Awards from all five regions are part of the APLU - A Community of Scholars Honoring Excellence program at the annual meeting. In that S&T was the originator of these recognitions and the need for a central and consistent leader, I as Executive Vice-chair, have assumed the role of point for each Award in working with the winners, regions, APLU and NIFA.
  - The National IPM Coordinating Committee (NIPMCC) was initiated by ESCOP and ECOP as a mechanism to formally engage the IPM community. Operating guidelines have been implemented and refined. A second successful Fall Conference leading to an initial report from the group's effort is being reviewed and will be submitted to ESCOP in 2018. Regular quarterly calls with the NIPMCC Executive Committee are in practice. This is a subcommittee of S&T and the ED supports the group.
  - The Social Sciences Subcommittee (SSSc) is a formal group comprised of ag communication, ag economists, ag education, ag leadership, human sciences and rural sociologists faculties with regional (6) configurations. Supported this effort and created the Advocacy 101 Session. This is a subcommittee of S&T.
- Support and participate with the Diversity Catalyst Committee chaired by Karen Plaut.
- Served as a 2017 ESS/ARD Annual Meeting planning committee member for the Philadelphia, PA event (with Doug Buhler).
- Serve on the BAA Committee on Legislation and Policy (CLP, formerly Farm Bill Committee).
- Work has been completed on the new ESCOP website. I have decreased my involvement significantly as David Leibovitz (NERA Coordinator) is the new operation lead with the other regional offices as available. The trick will be to get all regional offices to use and keep the website current.
- For ESCOP, participate in monthly Chairs Advisory Committee (CAC) calls and participate (as available) in the monthly Budget & Legislative Committee calls.
- Create and edit materials as needed. For example, ESCOP Agenda Briefs; feedback and monitoring on NIFA with the Time and Effort reporting; Advocacy efforts with the Single Ask; and the group ED edits on the one-pagers managed by Cornerstone Government Affairs and used by CARET-AHS during their Hill visits.
- Regularly work with the research and Extension EDs throughout the year.



### 3. PROFESSIONAL DEVELOPMENT

- Michigan State University – Understanding Implicit Bias Certification Program.
- NIFA and Others – Webinars on Big Data, Time and Effort and others tbd.
- Reading and self-study activities as appropriate.

### 4. TRAVEL

- North and South Dakota 1994 and CARET rep visits, Sept 11-13, 2017 [NCRA]
- Fall ESS, Sept 25-28, Philadelphia. [National, NCRA]
- NIPMCC, Oct 17-18, Washington, DC. [National, ESCOP, NCRA]
- NCRS Conservation and Soil Health Discussions, Oct 30-Nov 1, Washington, DC. [National, ESCOP, NCRA]
- FALCON Annual Conference, Nov 3-6, Washington, DC. [NCRA]
- APLU Annual Meeting, Nov 11-14, Washington, DC. [National, ESCOP, NCRA]
- NCAC1, Jan 10-12, 2018, San Diego, CA. [NCRA]
- KSU and NCRAC, Feb 6-11, Manhattan and Kansas City, KS. [NC, NCRA, NC]
- Social Sciences Subcommittee, Feb 27-March 1, Washington, DC. [S&T; National, NCRA]
- CARET/AHS, ESCOP, March 4-6, Crystal City, VA. [National, ESCOP, NCRA]
- NERA222, March 18-19, Baltimore, MD. [NC, NCRA]
- NCRA Spring, April 2-4, St. Louis, MO. [NCRA]
- NIFA Panel Manager Training, April 17-18, Washington, DC. [National, NCRA, NIFA pays]
- NERAOC, April 22-25, Grand Rapids, MI. [National, NCRA]
- NMCC, May 1-3, Washington, DC. [All EDs meeting]
- UW Madison and WI 1994s, May 7-10, WI. [NCRA]
- NRSP Review Committee, May 21-22, Providence, RI. [National, NCRA]
- Joint COPs, July 15-18 Guadalajara, MX. [National, ESCOP, NCRA]
- NC Mini Land-grant, July 22-24, Fargo, ND. [NC, NCRA]
- Tribal College Extension Program Panel, July/August, Washington, DC [National, NCRA, NIFA pays]
- Fall ESS Meeting and Workshop, October 1-3, Lincoln, NE. [National, NCRA]
- NIPMCC, Oct 22-24, Washington, DC. [National, ESCOP, NCRA]
- FALCON Annual Conference, November 3-5, Minneapolis, MN [NCRA]
- APLU Annual Meeting, Nov 10-13, New Orleans, LA. [National, ESCOP, NCRA]

## Chris Hamilton, NCRA Assistant Director

### 1. NCRA ACTIVITIES

- Manage all aspects of the NCRA office (meetings, financials, website maintenance, etc.), working closely and effectively with UW's CALS business services and also MSU (NCRA and ED budget).
- Worked with NCRA ED on the FY2019 NCRA budget.
- Participate in monthly NCRA Executive Committee calls.
- Partner with Robin Shepard of NCCEA to maintain strong communications between NCRA and NCCEA. I maintain NCCEA.org and the NCCEA Twitter account (@NCCEA) and can coordinate social media activities to maximize our joint regional research and Extension social media impact.
- Create reports and spreadsheets useful to the NC region, as needed and upon request (salary data, AES allocations, facilities inventories, etc.).
- Maintain NCRA Twitter account (@NCRegionalAssoc), posting relevant stories about AES research, news, etc. and leveraging stories to national attention. Twitter account now has 192 followers, including several association colleges and universities, national organizations, government partners, industry, and others.
- Continue to host and maintain the [www.nc-climate.org](http://www.nc-climate.org) website, showcasing NCR climate research, collaborations, and providing a central site for climate researchers contact information.
- Attended the 2017 NC Admin Boot Camps and participated on the NC Admin Boot Camp planning committee with Jeff Jacobsen, Robin Shepard (NCCEA) and other AES and EXT directors.
- Updated and streamlined the NCAC review process and communications with NCAC AAs. All NCACs have provided reviewers this year, unlike in the past. We're hoping for better success with review completion, as well.
- Provide high-level technical services to the NCRA and other regions, upon request.
  - Developed and released new NCRA website with an updated URL ([www.ncra-saes.org](http://www.ncra-saes.org))
  - Transitions to Zoom video conferencing and screen shares (updated from Adobe connect and this year) for conference calls, NIMSS help, and other training as needed.
  - Regular cloud back-ups of all NCRA office files at UW-Madison using local CALS servers and Box.com accounts.
  - File and data sharing through Google Drive and Box.com
  - Online Qualtrics Survey creation
  - Manage all NC email lists and NCRA Directories.
- Assisted with the nomination process and selection of the FY2018 NC ESCOP chair, Deb Hamernik
- Currently serving on the planning team for the 2018 Fall ESS/AES/ARD Meeting and Workshop in Lincoln, NE

### North Central Region Multistate Research Portfolio

- **Regular Support:** Regularly provide support to Administrative Advisors and SAES staff on navigating the NIMSS and interpretation of national and regional multistate guidelines. Prior to the NIMSS redesign, I continued to answer questions and provide information on ways around NIMSS' malfunctions and manually complete many NIMSS tasks and messages that used to be automated. Provide regular technical support and assistance to NC and other national NIMSS users.

- **FY2019 Renewing NC Projects:** Facilitated the renewal of NC multistate projects expiring in 2019 and midterm review evaluations. Coordinated the NC AAs, NC Advisory Committees, and the Multistate Review Committee. See the April 2018 MRC report for details.
- **ESS Excellence in Leadership Award:** Coordinated NC nominations for the Excellence in Leadership Award for 2018.
- **National Excellence in Multistate Research Award:** Solicited and coordinated the NC nominations for this award. I will also read and assist with the review and selection process during our spring MRC meeting.

## 2. NATIONAL ACTIVITIES

- With the NCRA ED, provide administrative leadership and assistance to NRSP1. Schedule calls, take minutes, coordinate committee activities, etc. I also provide the annual NIMSS REEport report for Clemson University. In 2017, I also co-wrote the NRSP1 renewal proposal for FY2018 to 2022 with Sarah Lupis and Jeff Jacobsen.
- With the NCRA ED, provide administrative leadership and assistance to the ESCOP Science and Technology (S&T) Committee. Schedule calls, take minutes, participate, coordinate committee activities, coordinate review and ranking of national multistate research award nominations, etc. In 2017, I co-created with Jeff the five documents used as ESCOP's submissions to the NAS 2030 Science Breakthroughs, adapted from the 2010 Science Roadmap. We also developed a new S&T committee charge and updated the Rules of Operation. Created a draft MS Publisher mock-up to use for Roadmap materials.
- Participate as a member of the ESS Diversity Catalyst Committee, formerly the ESCOP Diversity Task force. We hold monthly teleconferences and are currently discussing ways to provide ideas and actions for consideration, and to supplement institutional, regional and national diversity and inclusion efforts.
- Assist Dave Leibovitz (NERA AD) with updates to the ESCOP website ([www.escop.info](http://www.escop.info))
- Provide general NIMSS support to Bill Barker (lead AA) and John Bamberg (ARS, NRSP6 technical lead) for NRSP6 by authorizing annual meetings and uploading reports.
- Met with the new UW-Madison NRSP3 project lead to explain the NRSP process and NIMSS reporting requirements. I will continue to work with the new UW-Madison team and lead AA, Doug Buhler at MSU, to assist NRSP3 with NIMSS.
- NIMSS lead Regional System Admin: NIMSS is the Experiment Station's national workflow database for managing all multistate project activities. Sarah Lupis and I continue to communicate regularly with the Clemson NIMSS development team to solve issues, improve efficiency, and enhance the user experience within the NIMSS database. These efforts us to solve NIMSS issues quickly and efficiently and avoid the need for tedious software versioning issues, since changes are made in real time. This is our third year managing NIMSS.
- Creator and owner of the online NIMSS manual, a living document outlining all functions, tips, and tricks to make using NIMSS easy. Recently relocated the manual to <https://www.ncra-saes.org/nimss-manual>, so that when updates are made, users no longer need to change the file URL.
- Partner with the NIFA multistate research office to coordinate NIMSS project/participant approvals, occasionally serve as the NIMSS liaison for NIMSS/REEport issues, and other regional-USDA administrative tasks, as needed.
- Assisted with the nomination process and selection of the FY2018 NC ESCOP chair, Deb Hamernik (also listed above in Regional)
- Currently serving on the planning team for the 2018 Fall ESS/AES/ARD Meeting and Workshop in Lincoln, NE (also listed above in Regional)

### 3. PROFESSIONAL DEVELOPMENT

- In 2017, I attended the following conferences and workshops:
  - Addressing Unconscious Bias in Higher Education, offered as a webinar through APLU, January 13, 2017
  - ESCOP's Intercultural Development Inventory (via Zoom; I also had an additional personal IDI debrief with Pamala Morris.)
  - UW-Madison's Fully Prepared to Lead: Your Interpersonal Style
  - UW-Madison's Fully Prepared to Lead: Leadership Awareness
  - Preventing Sexual Harassment and Sexual Violence at UW-Madison
  - Workplace Negotiation Skills
  - 2017 Diversity Forum
  - 2017 UW-Madison's Leadership and Management Development Conference
  - 2017 UW-Madison Women & Leadership Symposium
  - UW-Madison CALS Monthly Diversity and Inclusion Lunch & Learns
- Will serve as a poster session volunteer in April for the World Food Prize – WI Youth Institute
- As time allows, I utilize UW's Lynda.com self-paced software training application to stay up-to-date on software applications applicable to my role in the NCRA. Current playlist includes:
  - Excel 2016 (half-way done)
  - Photoshop 2017
  - Publisher 2016
- Going forward in 2018, I have already or will attend the following professional development opportunities (most are offered with little to no coast at UW-Madison):
  - UW-Madison CALS Monthly Diversity and Inclusion Lunch & Learns (on-going)
  - Disability Awareness and Ableism (done)
  - UW-Madison's Fully Prepared to Lead: Personal Resiliency and Accountability
  - 2018 Diversity Forum
  - 2018 National Diversity Council Women in Leadership Symposium
  - 2018 UW-Madison's Leadership and Management Development Conference
  - 2018 UW-Madison Women & Leadership Symposium
  - UW-Madison's Fully Prepared to Lead: Time and Self-Management
  - UW-Madison's Fully Prepared to Lead: Face-to-Face Communication: Beyond the Basics
  - Implicit Bias and How to Address It (done)
  - UW's "Plain Language" certificate series (three courses in the series)

### 4. TRAVEL

- NERAOC, April 23-27, 2017, San Antonio, TX. [National, NCRA]
- NC Mini Land-grant, July 23-25, 2017 West Lafayette, IN. [NC, NCRA]
- Fall ESS Meeting and Workshop, Sept 25-28, 2017 Philadelphia, PA. [National, NCRA]
- NCAC15/NCERA220 Meeting, March 18, 2018, Middleton, WI [NCRA]
- NCRA Spring Meeting, April 2-4, 2018, St. Louis, MO [NCRA]
- NC Mini Land-grant, Fargo, ND, July 22-24, 2018 [NCRA]
- Fall ESS Meeting and Workshop, Lincoln, NE, Oct 1-3, 2018 [National, NCRA]
- APLU Annual Meeting, New Orleans, LA, Nov 10-13, 2018 [National]

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## **Item 5.2: NRSP1 Update**

**Presenters: Chris Hamilton, Jeff Jacobsen**

**Action Requested: For information only**

### **NIMSS Update:**

#### **Changes implemented since our September 2017 NCRA and ESS meetings:**

- A. Added ability for station directors to edit Appendix Es on draft projects
- B. Added password reset button to user search (RSA view only)
- C. Created automatic process to send report reminders
- D. Added project type (Research, CC, ERA, etc.) data to proposals
- E. Implemented automatic project termination / Adjusted project termination time
- F. Corrected issue with spacing in WYSIWYG text editor
- G. Added missing title field to NRSP basic view
- H. Initiated port of NIMSS to new Laravel framework (4.2 to 5.5) – started Fall 2017
- I. Created CSV for Form 1002
- J. Updated NIMSS manual URL
- K. Modified SAE annual report reminder emails and function
- L. Modified yearly summary to pull in AES stations
- M. Adjusted rapid response projects in draft proposal status
- N. Added a “Remind AA” button to allow RSAs to send automated report approval needed emails to AAs
- O. Ongoing implementation of NIMSS 3 (Framework 4.2 to 5.6)
- P. Added text to clarify review type when viewing anonymous project/proposal reviews

**Multistate Research Fund Impact Project Update**  
**2017 Annual Report and Fy18 Q1 (December 1, 2017 – March 5, 2018)**  
**SUMMARY**

**Impact Statements**

23 impact statements published in 2017 (2x 2016 output thanks to improved triage and expedited review processes).

- 3 impact statements published in Q1
- All impact statements broadly distributed to AES directors, NIFA leadership, Regional Offices, and committee members.
- Impact statements were frequently featured by NIFA and industry groups. For example:
  - NC-170 was featured in the *NIFA Update* from February 21, 2018:  
<https://content.govdelivery.com/accounts/USDANIFA/bulletins/1dcac2f>
  - NC-170: *“Sara, this is really awesome... We’ll amplify the message and share with the secretary’s office and with the WH... Josh, a number of states are represented – be good to alert staff.” – Sonny Ramaswamy*
  - S-294 featured on AgIsAmerica website, Facebook, and twitter on December 11:  
<http://agisamerica.org/14-land-grant-universities-work-together-to-improve-food-safety-practices-and-quality-control/>
  - Irrigation times article featured material from W3128 impact statement:  
<http://www.modernpubsonline.com/OA406ys/IrrigationTodayJan18/html/index.html?page=34&origin=reader>
    - Also picked up by Western Farmer-Stockman:  
<http://www.westernfarmerstockman.com/technology/irrigation-group-recognizes-innovators>
- View/download all Impact Statements at <https://www.multistateresearchimpacts.org/impact-statements>

**Social Media**

- 2017 twitter activity was up across all metrics—posts, impressions, retweets, and link clicks.
- Maria Jirele began working as the Social Media Specialist on January 5, 2018, at 10 hours per week
- Since then, we have:
  - Designed a new logo for the Multistate Research Fund Impacts Program to use on our social media platforms so that they look more professional and consistent
  - Created and launched the Multistate Research Fund Impacts Program [facebook](#)
  - Improved the [website](#) so that it is more attractive, easier to navigate, provides more useful information, and more consistent with our social media platforms
  - Created a plan for posting weekly content and increasing/engaging with followers
- Social media engagement and website visits are up in Q1. We continue to evaluate posts to optimize their effectiveness.

**Impact Writing Workshops**

- In 2017, our team delivered 8 workshops to multistate committees, colleges\*, and outside groups\*.
- In 2018, one MRF activity in each region will receive Impact Writing Workshops at their annual meetings

- NC1193: February 1 in Orlando, FL
- S1032: May 22-23 in Washington, DC
- W2006: September 17 in Boise, ID
- NE—TBD
- Feedback collected via post-workshop surveys is positive. Workshop participants consistently report increased knowledge and satisfaction with presenters' knowledge, delivery of materials, and rate the workshop as effective and engaging.
- Key takeaways from participants' evaluation comments:
  - The skills and knowledge that participants gained and the aspects of their work that they will do differently after attending match our intended goals for the workshop.
  - Many participants felt that the opening ice breaker exercise was good, but lasted for too long
  - Many participants felt more time was needed for the practice exercises.
  - Many participants wanted more examples of good impact statements during the presentation and to take away.

*\* These workshops were performed as contract work. The host institution paid speaker fees and travel costs as per the contract. All other workshops provided by Sara Delheimer and Sarah Lupis were provided under Impact Program and/or WAAESD scope of work. All Impact Writing Workshops are listed in this annual report in order to indicate the broad use and value of the workshop and materials originally created by the Impact Program.*

### **Meetings & Professional Development**

- January 2017 | Washington, D.C. | Sara Delheimer and Sarah Lupis
  - Met with kglobal to develop plans for impact statement distribution and improved formatting for social media
- June 2017 | New Orleans, LA | Sara Delheimer and Sarah Lupis
  - Participated in the Association for Communications Excellence annual meeting
- September 2017 | San Francisco, CA | Sara Delheimer
  - Participated in the World Conference of Science Journalists
- January 2018 | Baton Rouge, LA | Sara Delheimer
  - participated in the National Impact Database's annual impact writing meeting
- Sarah Lupis regularly participates in CMC and NIDB calls

### **2018 Goals & Objectives**

In 2018, the Multistate Research Fund Impacts Program's Director and Impact Writer will continue to perform all duties outlined in the 2017-2022 scope of work. In addition, we hope to emphasize the following work in 2018:

- Developing more attractive and useful Impact Statement formats;
- Increasing the number of Impact Statements developed;
- Supervising and assisting the Social Media Specialist with the development and implementation of an improved social media strategy, the success of which will be indicated by positive trends in the number of platforms, posts, followers, and engagement;
- Improving the Multistate Research Impacts website so that it includes more resources and is easier to navigate;
- Refining the Multistate Research Fund Impacts Program brand;

- Coordinating with NIFA and kglobal to regularly feature multistate research project stories in e-newsletters and on websites and social media; and
- Updating materials and determining best practices for delivering Impact Writing Workshop to multistate research project groups (see selection guidelines in Appendix D) and others.

**Visit! Like! Follow!**

[www.multistateresearchimpacts.org](http://www.multistateresearchimpacts.org)

<https://www.facebook.com/MRFImpacts/>

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**Item 5.3: ESCOP/ECOP National Impact Database Committee Agenda Brief**  
**(Created by Bill Brown and Eric Young for the March 2018 CARET/AHS ESCOP meeting)**  
**Presenter: Jeff Jacobsen**

**Action Requested: Discussion and Feedback Needed on the Impact Submission Review Process**  
**(highlighted below)**

The committee holds regular conference calls on the second Tuesday of each month. These calls have generally been well attended. The current committee membership is shown below.

<b>Membership</b>	
<b>Name</b>	<b>Role</b>
Bill Brown	Co-chair- AES
Karla Trautman	Co-chair- EXT
Debbie Lewis	Admin. Rep- EXT
Steve Loring	Admin. Rep- AES
Sarah Lupis	Multistate Research Impacts Initiative Representative
Faith Peppers	Land-grant Communications Representative
Johnnie Westbrook	Land-Grant Evaluation representative
Adele Turzillo	NIFA representative
Ron Brown	Southern ECOP Executive Director
Eric Young	Southern ESCOP Executive Director
<b>EX Officio Members</b>	
Scott Cummings	IT- Texas A&M University
Michael Harrington	West Region ESCOP Executive Director
Jeff Jacobsen	NC Region ESCOP Executive Director
Rick Rhodes	NE Region ESCOP Executive Director

**Content Team Meeting:**

- 28 stories; 15 fact sheets; one video
- <https://www.youtube.com/watch?v=-XG4h79H-eU&feature=youtu.be>
- Added 2 more designers and 3 more writers to the team this year.
- Stories and fact sheets are stored in the cloud and Scott Cummings has access to download to the database.

**Platform and Website Design:**

- Scott Cummings has developed a new website template. The database is not live yet. The new 2018 stories and fact sheets are being moved to the new site.
- Discussion on a possible logo and branding.

**Quality of Impact Statements:**

- Each institution will have up to two (2) site administrators. These individuals will have input rights and will also enter up to three (3) additional individuals who will have input rights to the database.
- All individuals with input rights must take approved training. The National Impact Database Committee will offer multiple webinars in 2018; specific dates to be announced.

Webinars will last approximately one hour and 15 minutes. For 2018, Sarah Lupis and Faith Peppers will be the primary webinar instructors. Peer review panel members (described below) are strongly encouraged to attend webinars in the first quarter. Individuals with input rights should participate as they are able.

- **Webinar Agenda:**

Welcome and Introductions (5 minutes)

“Big Impact: Why Impactful Reporting Matters and How to Do it Better” presentation (30 minutes)

*This dynamic presentation will summarize the characteristics of high-quality impact statements and emphasize the role they play in elevating the visibility of USDA-funded projects and activities.*

The Good, the Bad, and the Ugly (20 minutes)

*In this interactive session, participants will apply the lessons learned from the presentation as they evaluate examples of impact statements and discuss why they are good, bad, or ugly.*

Closing Remarks and Questions (10 minutes)

- Review committees will be established by region and administered by ECOP & ESCOP Executive Directors from those regions. Review committees will be composed of three (3) individuals each representing ECOP & ESCOP. Reviewers will be communicators or evaluators from the region’s institutions. Reviewers will serve for two years with appointments staggered. Initially, some reviewers will serve one year so that a rotation can be established.
- When submitted from a given region, an impact statement will be sent electronically to one of the six (6) reviewers in that region. The reviewer will accept to review the statement within a certain time period or an option will be available to not accept the review if there is a conflict of interest. The reviewer may accept the statement as written, in which case the statement will be immediately added to the database. If the reviewer feels that edits to the statement should be made, communication will take place within the system between the reviewer and the individual that input the statement into the system. Communication will continue until the statement is accepted (or not) by the reviewer and added to the database.
  - Analytics can be developed to catalog reviewer activity.
- At this point, there will be no limit to the number of statements that can be entered by a given institution per year.

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## **Item 7.0: 1994s Discussion Topic**

**Presenters: Gary Halvorson, Jeff Jacobsen**

### **Example of a Nebraska project with 1994 institutions in Nebraska**

Mark Griep (Professor, Chemistry) received an NSF EPSCoR Research Infrastructure Improvement Program Track-3 (RII Track-3) grant "Framing the Chemistry Curriculum." The grant started on October 1, 2013 and will terminate on September 30, 2019.

The project plans to develop a sustainable, two-semester chemistry course sequence at Nebraska Indian Community College (NICC) to be disseminated to other tribal colleges, including nearby Little Priest Tribal College (LPTC). The course is designed to be relevant to American Indians by including culturally rich examples and real-life applications. Topics include: water and wastewater treatment, Missouri River water quality, organic farming, alternative energy, ethnobotany, honey bee collapse disorder, and Type 2 diabetes. The projects were developed into case studies (based on community topics), each of which were linked to a specific laboratory method or measurement. Students learned how to connect topics of interest to the community to curricular materials by way of a partnership that involves community leaders, college faculty, college students, and community outreach.

Publications Produced as a Result of this Research:

Mark A. Griep, Beverly R. DeVore-Wedding, Janyce Woodard, and Hank Miller. "The Sharing Cycle of Science Learning: Connecting Community Topics to Tribal College Lab Courses," *Great Plains Quarterly*, v.36, 2016, p. 131. doi:10.1353/gpg.2016.0018 (<https://muse.jhu.edu/article/620530>)

### **Example of University of Minnesota collaboration with 1994 Institution**

Rebecca Montgomery is co-PI and the 1862 institutional partner on a USDA-NIFA Tribal Colleges Research Grant "Using plant phenology as an indicator of forest community resilience and adaptive capacity." with the Sustainable Development Institute of the College of Menominee Nation (PI: Chris Caldwell).

While many studies have shown that plant phenology is changing due to changing climate, little is known about the consequences of those changes. Plants often emerge, flower, seed, and go dormant as groups during different times of the growing seasons. Developing a better understanding of the timing of plant life cycles in relation to their environment and their consequences for reproductive fitness could provide strong indicators of changing conditions at both a more rapid and at a more local scale. These types of indicators could assist natural resource managers and local communities in adapting to change.

In this project, we study ground-layer plant phenology and microclimate; specifically, we ask: 'Are species that shift phenology with shifting climate more successful?' In addition, we are implementing a phenology trail that will provide experiential learning about plants and phenology, incorporate opportunities for citizen-based science, and highlight results from the research study. Trainings, and meetings about the research and trail engage the local, academic, and regional tribal communities to share information and findings, evaluate progress, and guide future research and engagement. The proposed project fills knowledge gaps in science, meets institutional research plans, enhances local research capacity, and capitalizes on prior investments.

## Summary of Tribal College Conversations 2017-2018

### Jeff Jacobsen, NCRA Executive Director

The Tribal Colleges, the 1994 Land-grant institutions, are a unique facet of the Land-grant family (1862 and 1890 LGUs) across the United States. The 1994s institutions have been in their current configuration for nearly 25 years and comprise 37 Tribal Colleges and universities. Depending upon the resource (e.g. NIFA website), the North Central region has 21 (57%), the Western region has 15 (40%), and the Southern region has one (3%) 1994 Land-grant institution(s) with total enrollment of around 30,000 students. In general, the primary mission is teaching (certificate, 2-year, 4-year, MS), with a different level of opportunity and resources targeted at Extension, and then followed by research. According to NSF figures (Research Features, Issue 111, 2017, ISSN 2399-1534), STEM Native Americans are about 1% of the U.S. STEM population (1.3% STEM AS and 0.6% STEM BS degrees) at <http://www.nsf.gov/nsb/sei/edTool/data/college-11.html>. From the same dataset, Native American students make up 0.5% of STEM MS and 0.4% PhD students. As with all higher education institutions, there is a wide range of applicable classroom, laboratory, greenhouse, farms, equipment and field facilities. Faculties have academic credentials that range from B.S. to Ph.D. depending upon the institution and many have credentials from other LGUs.

NCRA directors at their spring 2017 meeting participated in a program discussion with John Phillips (FALCON Executive Director) and Gary Halvorson (Sitting Bull College). Gary Halvorson was a liaison with NCRA a number of years ago and there was interest in rekindling that relationship. Based upon these discussions, the NCRA directors encouraged their Executive Director to delve deeper into possibilities and potential collaborations with North Central Region 1994s. With the assistance of John Phillips, a number of key contacts, activities, and institutions were identified to begin this process. It should be noted that John Phillips also participated in the mini Land-grant sessions hosted by Purdue (summer 2017) and there have been early discussions with NDSU, host of the 2018 mini Land-grant meeting, to explore the integration of all 1994s, as well as academic programs, into the 2018 program in Fargo, ND from July 22-24, 2018. In addition, the 1994s accepted an invitation to serve on ECOP's national committee, beginning in 2018. In 2016, NIFA conducted an invitation-only national summit with 1994s and selected Extension administrators and others following the 2016 ESS/ARD Annual Meeting in Wyoming. A summary report is found at: <https://nifa.usda.gov/sites/default/files/resource/1994%20and%201862%20Land%20Grant%20Cooperation%20Progress%20Report.pdf> The North Central Water Network has been actively involved with collaborations, as well. Collectively, there have been an increased number of early efforts to reach out to this community of LGUs.

Following our 2017 NCRA spring meeting, I conducted site visits to Bay Mills Community College (MI), United Tribes Technical College (ND), and Sitting Bull College (ND). During a Kansas State University visit discussed with successful faculty their observations and success stories with the Haskell Indian Nations University. Future visits target the College of Menominee Nation and Lac Courte Oreilles Ojibwa Community College, both in WI, in early May 2018. I also participated in the FALCON 2017 Annual Conference (First Americans Land-grant Consortium) which is comprised of students, faculty, administrators and others across preconference and conference workshops, student presentations and posters, panels, NIFA presentations, AIHEC (American Indian Higher Education Consortium) address, faculty presentations and an USDA Opportunity Fair rotations staffed by professionals across numerous USDA agencies. At the FALCON Business Meeting, I gave a brief partnership report. Attendance at the FALCON conference created the opportunity to meet the

current NIFA NPL, Tim Grosser, and the new NIFA NPL, Erin Riley with responsibilities with the 1994 LGUs.

As a point of information, NIFA has specific grant programs for 1994 institutions across teaching, Extension, and research. A cursory look at CRIS documents a recent increase in the number of successful research proposals through the Tribal Colleges Research Grants Program with 42%, 52%, and 1% received by institutions from the North Central, West, and South regions, respectively. Lastly, the pride and impact of receiving a NIFA competitive grant through the CARE Program (by Sitting Bull College with subs to Sinte Gleska University and Little Big Horn College) was extremely strong. As a reminder, I was a former CARE Program Panel Manager and after that activity concluded, I very modestly assisted with this grant, and created some credibility with some 1994 faculty and scientists. I have been subsequently asked to serve as a Panel Manager and participant for competitive Tribal Programs (Tribal Colleges Extension – Capacity and Special Emphasis Programs and the Tribal Colleges Research Grants) in 2018.

From the above experiences, I would share these limited and evolving observations which may be applicable across other 1994s.

#### General

- Examples of programmatic and culturally relevant efforts at North Central Tribal Colleges reflect: water quality, GIS, emerging diseases, tick and mosquito biology, environmental sciences, pesticides in ecosystems, fisheries and wildlife, medicinal native plants, aquatic invertebrates, invasive species, local foods, human health, sustainable food systems, ecology, restoration, natural resources, conservation biology, food security, horticulture, food science, plant phenology, crop production, rangeland management, and STEM.
- Examples of direct and indirect funding sources: NSF EPSCoR, NSF REU, NIFA, Department of Transportation, South Dakota State – Mines and Technology, USDA ARS, Federal and State FWS, APHIS/Wildlife, NASA, NIH INBRE, NRCS, NPS, USGS, NIH, Fish and Game, Department of Agriculture, Department of Corrections, various LGUs.
- Past missteps by LGUs, other institutions, and agencies have a long-term legacy to overcome, if any future partnership is to develop.
- Last minute requests for letters of recommendation or support or participation are all too frequent and not based on any type of prior relationship. The lack of emotional intelligence and awareness of cultural differences appears in numerous situations.
- Uptick of interest in research, in general, and particularly where there is faculty and facility capacity.

#### NCRA Connectors

- Opportunities to provide some instruction could be a catalyst for future collaborations.
- Research activities that directly involve students should be strongly considered. REU programs have been successful and some success has occurred with internships.
- Faculty expertise and 1994 LGU administration interest in research collaborations critically important.
- Research project must have a direct connection to the local community.

- Explore invitations to regional state business officer meetings as colleague to colleague (rather than NERAOC).
- Sponsor and select interested faculty to give a seminar and start building relationships. Important to bring undergraduate and graduate students to the Tribal Colleges. Integrate a social activity with this visit and depending upon time of year maybe some field activity.
- If student exchanges are a possibility, then the timeframe is typically 2-3 weeks away from their home and community. This could be a reciprocal visit, as appropriate.
- The 2018 FALCON meeting will be in Minneapolis, MN from November 3-5, 2018. NCRA (I will try to attend) and the University of Minnesota (possibly others) may wish to consider exploring collaborations for this meeting and beyond.
- If a mechanism could be identified, there may be some opportunities for the 1862s to donate selected and quality items to build capacity and jumpstart some true collaborations. This could include basic field equipment (vehicles, tractors, etc), routine lab and field equipment, and base resources (seed, trees, livestock).
- Consider the designation of funds to initiate some collaborations (Hatch, McIntire-Stennis, Animal Health and Disease)
- Create an inventory of academic programs, research thrusts and interests and other key demographic information for each North Central 1994 Institution.
- Following the service as Panel Manager, I will also be in a position to capture additional perspectives on research and Extension interests and capacity. This could lead to more targeted connections and conversations.
- Identify NCRA institutions (and NCRA directors) that want to build relationships and connections with North Central 1994 LGUs.
- Recently, I have been brought into the conversation with NIFA NPLs, faculty and staff at several 1994s that revolve around a unique developing interest from Microsoft. Initial discussions have revolved around the potential to support interns for short-term visits to Microsoft. Longer-term expressions of interest focus on vertical farming and bison. There are many dimensions to this longer-term proposition.
- There is a NSF program Tribal Colleges and Universities Program (TCUP) that may provide some significant opportunities for the right suite of faculty and institution at: [https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5483](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5483)

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## Item 9.0: ARS Update

Presenter: JL Willett

Action Requested: For information

USDA Agricultural Research Service (ARS)  
Report to NCRA State Agriculture Experiment Station Directors

April 2018

### Area Leadership

#### Plains Area

Area Director: Larry Chandler

Associate Area Directors: Bryan Kaphammer; vacant

Colorado, **Kansas**, Montana, **Nebraska**, New Mexico, **North Dakota**, Oklahoma, **South Dakota**, Texas, Wyoming

#### Midwest Area

Area Director: JL Willett

Associate Area Directors: Alberto Pantoja; vacant

Illinois, Indiana, Iowa, Kentucky, Michigan, Minnesota, Missouri, Ohio, Wisconsin

### Budget Information

#### FY 2018/2019 Budgets for ARS

- FY18
  - Salaries and Expenses
    - \$1,202,766,000 (+\$32,500,000)
    - \$140,600,000 buildings and facilities
    - funding increases for cotton ginning, alfalfa, small grains genomics, falling wheat, the National Agricultural Library, the National Arboretum, high performance computing, pear genetics, sustainable water use, warmwater aquaculture, poultry, the U.S. Wheat and Barley Scab Initiative, the Pulse Crop Health Initiative, rangeland research, floriculture, hops research, oriental fruit fly, cattle fever tick, UAS precision agriculture, plant and animal genomic research preservation, sorghum sugarcane aphid, cranberry and blueberry research, greenhouse research, molecular potato breeding, whitefly research, and human nutrition.
- FY19 President's proposed budget
  - Salaries and Expenses:
    - \$1,018,991,000
    - Decrease of \$143 million from the FY 2018 CR annualized appropriation
    - Program Increases 52,600,000
      - National Bio- and Agro-Defense Facility O&M 42,000,000
      - NBAF Transition Costs 10,600,000
    - Decreases (193,029,000)

- Proposed Location/Laboratory/Worksite Closures (121,671,000)
    - Proposed Project Terminations (71,358,000)
  - Transfer of OPMP to OCE (2,868,000)
- No Buildings and Facilities.

## **New Leadership and Vacancies**

### ***Midwest Area***

- Illinois
  - Global Change and Photosynthesis Research, Urbana (vacant; Lisa Ainsworth, Acting RL)
  - Soybean/Maize Germplasm, Pathology, and Genetics Research, Urbana (Les Domier, Acting RL)
  - National Center for Agricultural Utilization Research, Peoria
    - Center Director (vacant; Alex Rooney, Acting CD)
    - Bioenergy Research (Ron Hector, Acting RL)
    - Bio-oils Research (Terry Isbell, Acting RL)
- Iowa
  - Corn Insects and Crop Genetics Research, Ames (Tom Sappington, Acting RL)
- Kentucky
  - Forage Animal Production Research, Lexington (vacant, Michael Flythe, Acting RL)
- Minnesota
  - Soil Management Research, Morris (Jane Johnson, Acting RL)
- Missouri
  - Plant Genetics Research, Columbia (Bruce Hibbard, Acting RL)
- Ohio
  - Applications Technology Research, Wooster (vacant; James Altland, Acting RL)
  - Corn, Soybean, and Wheat Quality Research, Wooster (vacant; Byung-Kee Baik, Acting RL)

### ***Plains Area***

- Kansas
  - Center for Grain and Animal Health Research (Manhattan)



- Arthropod-Borne Animal Diseases Research Unit (vacant, Bill Wilson, Acting RL)
- North Dakota
  - Insect Genetics and Biochemistry Research Unit (Fargo), (vacant, Joseph Rinehart, Acting RL)
  - Sunflower and Plant Biology Research Unit (Fargo), (vacant, James Anderson Acting RL)
  - Sugar Beet and Potato Research Unit (Fargo), (vacant, Melvin Bolton, Acting RL)
  - Grand Forks Human Nutrition Research Center (Grand Forks)
    - Healthy Body Weight Research Unit (vacant, Kate Claycombe, Acting RL)
  - Northern Great Plains Research Laboratory (Mandan) (David Archer, RL)
- Nebraska
  - USMARC
    - Center Director, (vacant, Gary Bennett, Acting CD)
    - Reproduction Research Unit, (Acting RL, Gary Rohrer)
- Colorado
  - Fort Collins, Center for Agricultural Resources Research (CARR)
    - Soil Management and Sugarbeet Research (vacant, Jorge Delgado, Acting RL)
    - Water Management Systems Research (vacant, Greg McMaster, Acting RL)
    - National Laboratory For Genetic Resources Preservation (Fort Collins)
      - Plant and Animal Genetic Resources Preservation (vacant, Harvey Blackburn, Acting RL)
- Texas
  - Bushland
    - Livestock Nutrient Management Research Unit (vacant, David Brauer, Acting RL)
  - College Station

- Southern Plains Agricultural Research Center, Crop Germplasm Research Unit, Richard Percy retired (vacant, Wayne Ivie, Acting RL)
- Southern Plains Agricultural Research Center, Insect Control and Cotton Disease Research Unit, Robert Stipanovic retired (vacant, Wayne Ivie, Acting RL)
- Aerial Application Technology Research Unit (vacant, Wayne Ivie, Acting RL)
- Lubbock
  - Cropping Systems Research Laboratory, Laboratory Director (vacant, Acting LD, Dave Brauer)
  - Plant Stress & Germplasm Development Research Unit (Paxton Payton RL)
- Temple
  - Grassland, Soil & Water Research Laboratory, Daren Harmel, CD CARR Ft Collins (vacant, Douglas Smith, Acting RL)

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## Item 14.0: MRC Report

Presenter: Greg Cuomo, MRC Chair

### Actions Requested:

- Approval of the MRC's recommendations for new/renewal projects and midterm reviews (see below)
- Approval of the MRC's recommendation for the NC nominee to the National Excellence in Multistate Research 2018 Award – NCERA217
- Solicit any comments/questions to forward to the NRSP-RC regarding NRSP\_temp8 and the midterm reviews
- Identify a new MRC member for FY2019 – Jane Schuh
- Discuss what reimagined multistate projects might look like

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**MRC 2018 Members:** Greg Cuomo (Chair), George Smith, Hector Santiago, Bill Barker, Jeff Jacobsen (Ex-officio)

### Summary of MRC 2018 Multistate Project Recommendations:

(Please refer to our [MRC Detailed Table](#) or NIMSS for detailed notes/recommendations)

### Item 14.1: New/Renewal Project Recommendations:

1. Greg: NC2040 (NC\_temp2040), Metabolic Relationships in Supply of Nutrients for Lactating Cows: **Approve with Minor Revision**
2. Hector: NC1170 (NC\_temp1170), Advanced Technologies for the Genetic Improvement of Poultry: **Approve with Minor Revision**
3. George: NC2042 (NC\_temp2042), Management Systems to Improve the Economic and Environmental Sustainability of Dairy Enterprises: **Recommend Major Revision and Re-Review.**
4. Hector: NC213 (NC\_temp213), Marketing and Delivery of Quality Grains and BioProcess Coproducts: **Approve with Minor Revision.**
5. Greg: NC2172 (NC\_temp2172), Behavioral economics and financial decision-making and information management across the lifespan: **Approve with Minor Revision.**
6. Bill: NC2169 (NC\_temp3169): EFNEP Related Research, Program Evaluation and Outreach: **Approve as-is.**
7. Jeff: NC\_temp1207 (New project), Collaborative for Research on Food, Energy, and Water Education: **Approve with Minor Revision.**

8. Jeff: NCCC307 (NCCC\_temp307), Biochemistry and Genetics of Plant-Fungal Interactions: **Approve with Minor Revision.**
9. George: NCCC308 (NCCC\_temp308), Nutrition and Management of Feedlot Cattle to Optimize Performance, Carcass Value and Environmental Compatibility (NCT192): **Recommend Approval.**
10. Bill: NCERA210 (NCERA\_temp210), Improving the management and effectiveness of cooperatively owned business organizations: **Approve as-is.**

#### **Item 14.2: Midterm Review Recommendations (Chris)**

1. NC1100, Enhancing Rural Development Technology Assessment and Adoption Through Land Grant Partnerships: Meets reporting and meeting requirements in NIMSS; good AA review. Recommend continuation.
2. NC1183, Mycotoxins: Biosecurity, Food Safety and Biofuels Byproducts (NC129, NC1025): Recommend continuation, but we hope the committee will submit more thorough, collaborative reports on-time, after each annual meeting. The committee also needs improved understanding of impacts vs activities.
3. NC1187, The Chemical and Physical Nature of Particulate Matter Affecting Air, Water and Soil Quality: Meets reporting and meeting requirements in NIMSS; recommend continuation.
4. NC1023, Engineering for food safety and quality: Meets reporting and meeting requirements in NIMSS, but should work on preparing reports that are more collaborative and showcase multistate impacts, rather than individual station reports. Recommend continuation.
5. NC1184, Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.
6. NC1186, Water Management and Quality for Ornamental Crop Production and Health: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.
7. NC246, Ecology and Management of Arthropods in Corn: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.
8. NCCC134, Applied Commodity Price Analysis, Forecasting, and Market Risk Management: Meets reporting and meeting requirements in NIMSS; no AA or NCAC reviews submitted. Recommend continuation.
9. NCCC52, Family Economics: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.

10. NCCC211, Cover crops to improve environmental quality in crop and biofuel production systems in the Great Lakes and Upper Mississippi basins: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.
11. NCCC31, Ecophysiological Aspects of Forage Management: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.
12. NCERA197, Agricultural Safety and Health Research: Meets reporting and meeting requirements in NIMSS; good reviews. Recommend continuation.

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**NRSP 2018 – 2019 (FY2019)**  
**Off-the-Top Funding Summary**

Project	FY2018 Approved <sup>1</sup>	FY2019 Approved <sup>1</sup>	FY2020 Approved <sup>1</sup>	FY2021 Approved <sup>1</sup>	FY2022 Approved <sup>1</sup>	FY2022
NRSP 1	220,052	224,565	230,755	237,131	243,697	-
NRSP 3	50,000	50,000	-	-	-	-
NRSP 4	481,182	481,182	481,182	-	-	-
NRSP 6	150,000	150,000	150,000	-	-	-
NRSP 8	500,000	-	-	-	-	-
NRSP 9	225,000	225,000	225,000	-	-	-
NRSP 10	433,969	406,591	-	-	-	-
<b>Approved Total</b>	<b>\$2,060,203</b>	<b>\$1,537,338</b>				
		<b>Requested</b>	<b>Requested</b>	<b>Requested</b>	<b>Requested</b>	<b>Requested</b>
NRSP_temp 8	-	\$500,000	500,000	500,000	500,000	500,000
<b>Grand Total</b>	<b>\$2,060,203</b>	<b>\$2,037,338</b>				
<b>1% of Hatch<sup>2</sup></b>	<b>\$2,437,010</b>	<b>\$2,437,010</b>				
<b>Difference</b>	<b>\$376,807</b>	<b>\$399,672</b>				

<sup>1</sup> Assuming an acceptable midterm review, all NRSP budgets were approved for the duration of their current, five-year cycles.

<sup>2</sup> These values assume Hatch values at FY17 amounts and are subject to change when a FY18 Federal budget is enacted.

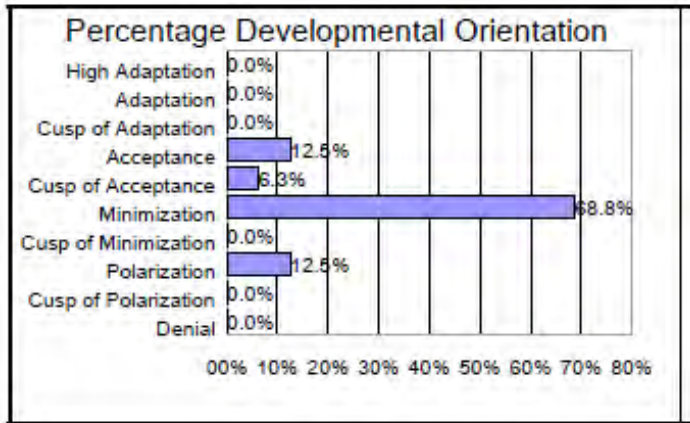
**Summary of NRSPs**

Project Number	Project Name	Project Period	Midterm Review Year
NRSP-1	National Information Management and Support System	2018-2022	2020
NRSP-3	The National Atmospheric Deposition Program (NADP)	2014-2019	2017
NRSP-4	Enabling Pesticide Registrations for Specialty Crops and Minor Uses	2015-2020	2018
NRSP-6	The US Potato Genebank: Acquisition, Classification, Preservation, Evaluation and Distribution of Potato (Solanum) Germplasm	2015-2020	2018
NRSP-8	National Animal Genome Research Program	2013-2018	2016
NRSP-9	National Animal Nutrition Program	2015-2020	2018
NRSP10	Database Resources for Crop Genomics, Genetics and Breeding Research	2014-2019	2017

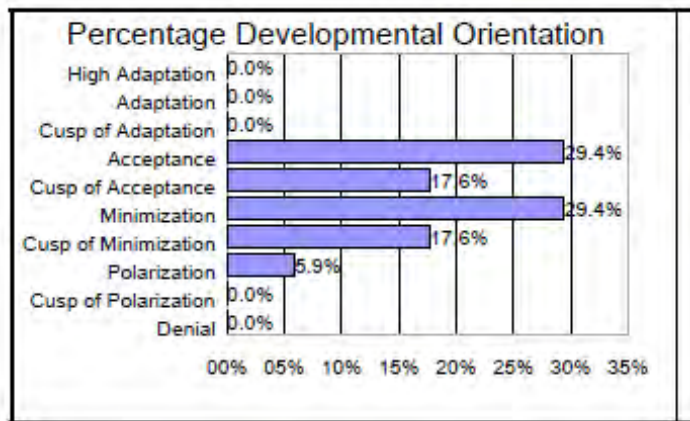
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**Item 15.0: NCRA IDI Survey De-brief and Discussion**  
**Presenters: Pamala Morris, Patreese Ingram (via Zoom)**  
**Action Requested: For information and discussion**

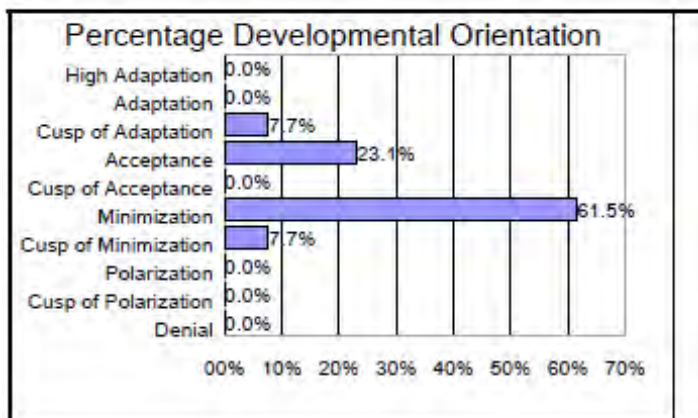
**2017 ESS Summary by Region:**



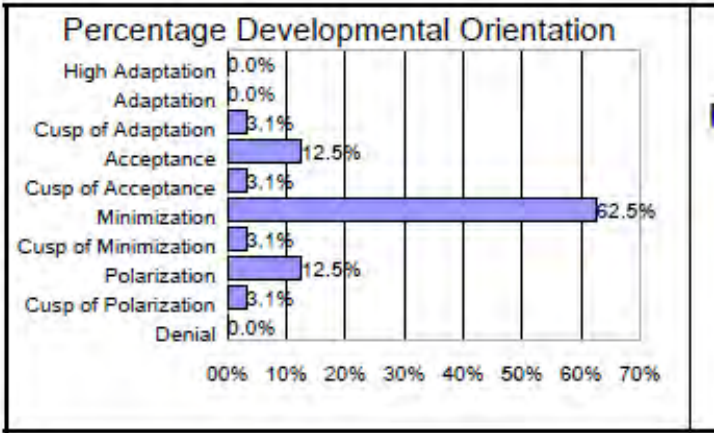
**ARD Region**



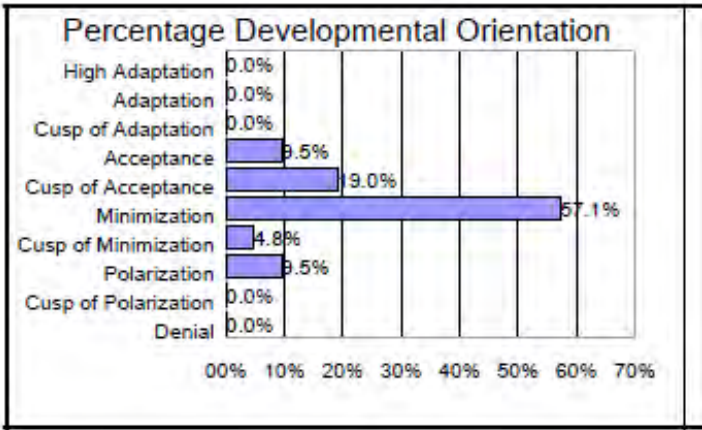
**NC Region**



**NE Region**



**S Region**



**W Region**

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**Item 17.2: ESCOP Standing Committee Reports:**

**ESCOP Budget and Legislative Committee Agenda Brief**

**Created by Bill Brown and Mike Harrington for the March CARET/AHS ESCOP Meeting**

**Presenter: Ernie Minton**

**Action Requested: For information only**

The committee holds regular conference calls on the last Tuesday of each month. These calls have generally been well attended. The current B&L Committee membership is shown below.

<p><b>Chair:</b> Bill Brown (UTK)</p> <p><b>Delegates:</b> Bobby Phils (ARD) Alton Thompson (ARD) Dave Benfield (NCRA) Ernie Minton* NCRA Sabine O’Hara(NERA) Jon Wraith (NERA) George Hopper (SAAESD) Saied Mostaghimi (SAAESD) Jim Moyer (WAAESD) Glenda Humiston (WAAESD) <b>Executive Vice- Chair</b> Mike Harrington (WAAESD)</p>	<p><b>Liaisons</b></p> <p>Doug Steele (ECOP Liaison) Bob Holland (NIFA) Paula Geiger (NIFA) Josh Stull (NIFA) Glen Hoffsis (APLU Vet Med) Eddie Gouge (APLU) Ian Maw (APLU) Becky Walth (CARET) Cheryl Achterberg (APLU - BoHS) Jim Richards (Cornerstone) Hunt Shipman (Cornerstone) Vernie Hubert (Cornerstone) Jeremy Witte (Cornerstone)</p> <p><b>*Chair elect</b></p>
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The committee holds regular monthly conference calls.

The B&L Committee held a breakfast meeting on March 5 in conjunction with the AHS-CARET meetings. Doug Steel (ECOP B&L Committee chair) was also be in attendance. Discussions focused on advocacy for the single increase budget request for NIFA, strategic realignment efforts, and work products for the 2018 year.

**T&E Reporting:** A revised [fact sheet](#) was released November 9, 2017. The revision included the B&L requested a set of bullet points that would capture NIFA expectations. Also requested were examples of problems that have surfaced in audit/reviews. The restriction on using federal funds in grant writing was missing. Recent discussions focused on the Council on Government Relations (COGR) input into the NIFA Time and Effort reporting fact sheet. It is COGR’s opinion that certain items in the fact sheet would require OMB approval in order to implement.

**Strategic Realignment of small lines:** The Committee has discussed the realignment of small lines concept and is in favor of moving this effort forward.

All documents related the federal budget are located at the [land-grant.org](http://land-grant.org).

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## Science and Technology Committee – Agenda brief from March 2018 ESCOP Meeting

Presenters: Joe Colletti, Deb Hamernik, Jeff Jacobsen

Action Requested: For Information only

### **Committee Members:**

Laura Lavine (WAAESD; Chair)

Gene Kelly (WAAESD)

tbd (WAAESD)

Joe Colletti (NCRA)

Deb Hamernik (NCRA)

John Kirby (NERA)

Adel Shirmohammadi (NERA)

Nathan McKinney (SAAESD)

Susan Duncan (SAAESD)

John Yang (ARD)

Alton Thompson (ARD)

### **Liaisons:**

Terry Nelsen (ERS)

Bob Matteri (ARS)

Dwayne Cartmell (SSSC; Social Sci Subc)

Patrick Beauzay (NIPMCC; Pest Mgmt Subc)

Parag Chitnis (NIFA)

Denise Eblen (NIFA)

Edwin Price (ICOP)

Jeff Jacobsen (Exec Vice-Chair, NCRA ED)

Chris Hamilton (recorder, NCRA AD)

**Website:** <http://escop.info/committee/scitech/>

### **Information Items:**

#### S&T Committee

Monthly conference calls and email are the primary means of activity for S&T. All agendas and detailed minutes are posted on the ESCOP website. A refined S&T charge and updated Rules of Operation have been completed. The primary focus of S&T for late 2017 and 2018 has been, and will be, a significant revision of the Science Roadmap. We have reviewed the previous Science Roadmap, the overall goals, audience, distribution, timeline, writing/review/approval processes and preliminary assignments for the new Science Roadmap. The recommendation from this comprehensive review is that a new format for the Science Roadmap is timely. An early concept, the S&T committee endorses, is the one-page topic format which is a concept used by many professional societies and associations. S&T has prepared a preliminary mock-up for our discussion purposes. S&T members have reviewed a number of professional societies and associations one-pagers and longer documents, the Challenge of Change Report, the Water Security white paper, the Antibiotic Resistance and the Healthy Food System, Healthy People publications.

S&T has envisioned color, front and back one-pagers with *potential* content boxes of: Grand Challenge, Expected Outcomes/Impacts, Key Resources, Key Gaps, Success Stories (possibly) and the ESCOP logo, website and key resource links identified. We would describe the facets of ESS while capturing the concept of Grand Challenges, 'honor' the original Science Roadmap and potentially add new Grand Challenges such as Data Science, Workforce Development, ONE Health and more. When we have a suitable mock-up and New Roadmap concept, we will share these with the ESCOP leadership for review and feedback.

#### National Integrated Pest Management Coordinating Committee (NIPMCC)

The NIPMCC Executive Committee conducts quarterly Zoom meetings to synthesize the 2017 State of IPM Report which will be submitted to ESCOP and ECOP and discuss future actions/agendas.

This was a result of the 2017 meeting and part of the ongoing charge to NIPMCC. The next NIPMCC meeting will be from October 23-24, 2018 at APLU. Summary information for the NIPMCC can be found at: <http://escop.info/committee/national-integrated-pest-management-coordinating-committee-nipmcc/>.

#### Social Sciences Subcommittee (SSSC)

SSSC makes recommendations for specific actions to help the Land-grant system address high priority research and education issues leading to outcomes that deal with social issues in a significant, measurable way and that will generate sustained financial support. The SSSC has nearly 50 members spanning the disciplinary areas of: Agricultural Economics, Agricultural Education, Agricultural Communications, Agricultural Leadership, Human Sciences and Rural Sociology across the five regional associations and an At-large category.

The SSSC met on February 28 – March 1, 2018 with a complete Agenda and in the future minutes to be posted at: <http://escop.info/committee/social-sciences-subcommittee-sssc/>. In general, the meeting themes and topics discussed were APLU activities, NIFA updates, 2017 Action Items Updates, Advocacy Across the Social Sciences, Professional Group Updates (COSSA, C-FARE, Rural Policy Research Institute and Farm Foundation).

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**Agenda Brief:** Communications and Marketing Committee (CMC)

**Date:** March 1, 2018 (created by Rick Rhodes for CARET/AHS ESCOP meeting)

**Action requested:** For information only.

**1. Committee Membership (as of March 1, 2018):**

<b>Voting Members:</b>	<b>First Name</b>	<b>Last Name</b>	<b>Region</b>	<b>Term</b>	<b>Email</b>
Chair (CES) <sup>1</sup>	Mark	Latimore	1890	2016 – 2019	<a href="mailto:latimorm@fvsu.edu">latimorm@fvsu.edu</a>
Incoming Chair (ESS) <sup>1</sup>	Steve	Loring	West	2018 – 2021	<a href="mailto:sloring@ad.nmsu.edu">sloring@ad.nmsu.edu</a>
Past Chair (AHS) <sup>1</sup>	Beverly	Durgan	North Central	2015 – 2018	<a href="mailto:bdurgan@umn.edu">bdurgan@umn.edu</a>
AHS Chair <sup>2</sup>	Alan	Grant	South	2017 – 2018	<a href="mailto:algrant@vt.edu">algrant@vt.edu</a>
CES Chair <sup>2</sup>	Chuck	Hibberd	North Central	2017 – 2018	<a href="mailto:hibberd@unl.edu">hibberd@unl.edu</a>
ESS Chair <sup>2</sup>	Gary	Thompson	Northeast	2017 – 2018	<a href="mailto:gat10@psu.edu">gat10@psu.edu</a>
AHS Representative <sup>3</sup>	Nancy	Cox	South	2017 – 2019	<a href="mailto:ncox@email.uky.edu">ncox@email.uky.edu</a>
CES Representative <sup>3</sup>	Steve	Bonanno	Northeast	2016 – 2018	<a href="mailto:SCBonanno@mail.wvu.edu">SCBonanno@mail.wvu.edu</a>
ESS Representative <sup>3</sup>	Mark	Rieger	Northeast	2017 – 2019	<a href="mailto:mrieger@udel.edu">mrieger@udel.edu</a>
ACOP Representative <sup>3</sup>	Cynda	Clary	South	2016 – 2018	<a href="mailto:cynda.clary@okstate.edu">cynda.clary@okstate.edu</a>
ACE Representative <sup>4</sup>	Faith	Peppers	South	2016 – 2018	<a href="mailto:pepper@uga.edu">pepper@uga.edu</a>
CARET Representative <sup>3</sup>	Becky	Walth	North Central	2016 – 2018	<a href="mailto:walth@valleytel.net">walth@valleytel.net</a>
CGA Representative <sup>3</sup>	Rick	Mertens	South	2015 – 2017	<a href="mailto:richard.mertens@tamu.edu">richard.mertens@tamu.edu</a>
NIDB Representative <sup>3</sup>	Sarah	Lupis	West	2016 – 2018	<a href="mailto:Sarah.Lupis@colostate.edu">Sarah.Lupis@colostate.edu</a>
<b>Non-Voting Members:</b>					
kglobal Liaison	Jenny	Nuber	N/A	N/A	<a href="mailto:jenny.nuber@kglobal.com">jenny.nuber@kglobal.com</a>
Cornerstone Liaison	Hunt	Shipman	N/A	N/A	<a href="mailto:hshipman@cgagroup.com">hshipman@cgagroup.com</a>
AHS ED/Admin. Rep	Ian	Maw	N/A	N/A	<a href="mailto:IMaw@APLU.ORG">IMaw@APLU.ORG</a>

ECOP ED/Admin. Rep	Rick	Klemme	N/A	N/A	<a href="mailto:rickklemme@extension.org">rickklemme@extension.org</a>
ESCOP ED/Admin. Rep	Rick	Rhodes	N/A	N/A	<a href="mailto:rcr3@uri.edu">rcr3@uri.edu</a>

The CMC Operational Guidelines define:

1. The officer (Chair, Incoming Chair, and Past Chair) terms are one year in each office for a total of three years.
2. The section (AHS, CES and ESS) chairs serve on the CMC during their terms of office, which is one year.
3. Members representing the three sections (AHS, CES and ESS) and other organizations except ACE have two year terms and can be reappointed indefinitely.
4. The ACE representative serves a three-year term and can be reappointed once (proposed.)

**2. Meetings:**

- The CMC met by teleconference on October 17, 2017.
- The CMC met by teleconference on January 24, 2018.
- The annual face-to-face meeting of the CMC will be held on March 4, 2018.

**3. Accomplishments/Upcoming Plans:**

- The CMC forwarded a recommendation to the BAA seeking appointment of the CMC as a standing committee of the BAA. (The CMC is currently a standing committee of ESCOP with participation by ECOP and AHS.) The BAA tabled the request and is seeking input from its members.
- kglobal has developed “lessons learned” from the first video campaign that supported the APLUs “One Ask” (attached.) While the video campaign tripped off modest responses from the Land-grant community, Cornerstone reported that Congress received more input than any other previous “call to action.”
- kglobal is initiated a series of mini “calls to action” to assist in developing strategies for reaching key constituent groups.
- The CMC presented a brief of activities at the BAA business meeting on November 12, 2017.
- On December 6, 2017, APLU executed contract with kglobal for continuing work for calendar year 2018.
- kglobal and Cornerstone did a tag-team presentation on advocacy, communications and marketing at the New Administrators Orientation, December 13-14, 2017.

- kglobal released Q4 report (attached.) Much of Q4 was dedicated to small “calls to action” (see bullet above) to test engagement of social audiences.

4. **Action Requested:** For information only.

5. **Attachments:**

- a. kglobal, “AgIsAmerica November CTA: Food Safety. Social Engagement Call-to-Action Campaign Memo,” December 22, 2017.
- b. kglobal, “Association of Public and Land-grant Universities. 2017 Q4 Insights Report,” October 1, 2017-December 31, 2017.

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## ESCOP Diversity Catalyst Committee – Agenda Brief from March CARET/AHS ESCOP meeting

**Presenters:** Jeff Jacobsen, Chris Hamilton

**Action Requested:** For information only

### **Committee Members:**

Karen Plaut (Chair)	Jackie Burns (SAAESD)
Ali Fares (ARD)	L. Wes Burger (SAAESD)
Charles Boyer (WAAESD)	Shannon Archibeque-Engle (Diversity Professional)
Cynda Clary (APS)	Gary Thompson (NERA)
Doze Butler (APS and ARD)	Brian Raison (ECOP)
Soyeon Shim (BHS)	Alton Thompson (ARD)
Rick Rhodes (NERA)	David Leibovitz (NERA)
Sara Lupis (WAAESD)	Chris Hamilton (NCRA)
Donna Pearce (SAAESD)	Bobbie Moore (NIFA)
Jeff Jacobsen (NCRA)	

**ESCOP Website:** <http://escop.info/committee/diversity-catalyst-committee/>

The Diversity Catalyst Committee (DCC) continues to recommend that ESS members and leadership review and implement, where appropriate, elements of the initial Task Force Report in conjunction with any individual institutional efforts with diversity, inclusion and equity. In addition, activity at the regional association level is highly encouraged. The DCC will focus on the highest priority elements from the major thrusts in the Task Force report (Recruitment and Mentoring, System Integration, Training and Best Practices). Electronic communications and actions are the mode of operation with meetings now held quarterly. In the interim, an extensive library of books and other reference materials are available on the ESCOP website under the DCC Resources. Minutes and supplementary materials are routinely posted on the website. Our Rules of Operation have been finalized. Currently, the inaugural call for the National Experiment Station Section Diversity and Inclusion Award is active with a due date of March 30, 2018. The Award call is provided below.

Specifically, we would point out the new “Links” header under the “Resources” box where we will continually add new materials, training and other key resources in support of our efforts (<http://escop.info/dcc-training-resources/>). These are provided to enhance our collective efforts and provide dynamic resources to directors and other allied members. We are actively reviewing our DCC Committee membership, encourage active participation and will reaffirm or recommend new appointments as necessary. Bobbie Moore, NIFA Civil Rights Director has been officially added to the DCC membership. A replacement will be found for Charles Boyer (WAAESD) and Jackie Burns (SAAESD) will rotate off and not be replaced. Wendy Fink (APLU) has been asked to contact the BHS for a replacement for Soyeon Shim. Donna Pearce has joined DCC as committee support.

In addition to continually reviewing the original Task Force Report, the DCC will institute a regular element in our quarterly calls with regional highlights on innovative activities. Where applicable, these will be recorded and uploaded. DCC members also commit to reporting any individual member activity relevant to the DCC. Finally, the DCC has actively provided input into the Fall 2018 ESS/ARD Annual Meeting program to ensure continued engagement across the national group.



## National Experiment Station Section Diversity and Inclusion Award<sup>1</sup>

Beginning in 2015 with the establishment of the ESCOP Diversity in Research Leadership Task Force (now the permanent Diversity Catalyst Committee), the Experiment Station Section (ESS as AES and ARD) forged a new commitment to increase diversity across its constituencies and foster inclusive environments which empower all groups within organizations to work better collectively. **Diversity** is defined as differences among people with respect to age, socioeconomic status, ethnicity, gender, physical and mental ability, race, sexual orientation, religion and spiritual practices and other human differences. An **inclusive organization** is defined as having a culture which empowers all members to continually innovate, assess and redesign programs, policies and practices to support the success of its membership. ESS through its individual and collective efforts aspires to consistently and holistically model and practice inclusive excellence, as is expected of modern institutions and organizations affiliated with Higher Education.

The National Experiment Station Section Diversity and Inclusion Award support efforts that go beyond simply meeting EEO/AA program requirements. This award recognizes research efforts that support the creation of diverse and inclusive teams at the local, state, regional, or national level. Such efforts could impact one or more of the following areas: administration, advisory and decision-making groups, audiences, coalitions, educational materials and delivery methods, funding, initiatives, policies, programs, staff, and stakeholders.

### Award Presentation

The recipient(s) of the National Experiment Station Section Diversity and Inclusion Award will be recognized at the annual AES/SAES/ARD Meeting held in September/October each year with a commemorative plaque and \$1,000 cash award from ESS. Travel reimbursement to attend the awards event will be provided for the primary recipient(s) by ESS. The recipient(s) will be asked to submit photos and a project summary for the ESCOP website, the NIFA Update and for integration into the APLU Award Program. The awardees will also be asked to submit an impact statement for the [landgrantimpacts.org](http://landgrantimpacts.org) database which describes research impacts to the public.

### Eligibility and Deadline

The nominee can be an individual, a team or an organization composed of faculty and scientists, staff, students, post-docs or others who contribute to ESS projects and activities in clear and quantifiable ways. The due date for nominations is March 30, 2018. To be considered, nominations must be submitted by email to the DCC Executive Vice-Chair, Jeff Jacobsen ([jjacobsn@msu.edu](mailto:jjacobsn@msu.edu)).

### Criteria for Nominations

Nominations can be submitted from any area of ESS. Nominations can be made by anyone, including self-nominations. When writing nominations, special attention should be given to efforts that have the potential to be sustained over time or can be replicated in other comparable situations.

The five following elements (total 100 points) will be considered in the review process and should be described clearly in the nomination.

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<sup>1</sup> This award nomination was adopted with permission from the Extension Diversity Award.

**Purpose:** Why was this effort undertaken? Describe the efforts by a person, group or organization to achieve diversity and inclusion in an ESS project/program (e.g., Hatch, Hatch Multistate, Evans-Allen, McIntire-Stennis). How does the project achieve diversity and inclusiveness with its advisory and decision-making groups, audiences, staff, and stakeholders? (Maximum 10 points)

**Basis:** Why is this effort worthy of recognition? (Maximum 20 points)

**Effort:** Are actions and activities in support of diversity and inclusiveness appropriate and fundamentally sound? How do the actions and activities demonstrate impact? (Maximum 20 points)

**Impact:** Describe efforts that have led to positive, sustainable programmatic and/or organizational change across ESS, institution(s), college(s), department(s) and/or other units? (Maximum 30 points)

**Innovation:** How did (or will) this effort enhance existing models or create new models for positive change? (Maximum 20 points)

### **Nomination Package Guidelines**

Nominations must not exceed word limits below, and must contain the following:

1. Name, title, address, phone number and e-mail of nominee(s).
2. Name, title, address, phone number and e-mail of nominator(s).
3. A brief synopsis of nomination (30 words or less).
4. A narrative explaining the five elements in the criteria given above (400 words or less per element).

### **Limitations**

Incomplete applications or applications in excess of size limitations will not be considered. Please do not forward DVD's, bound publications or other support materials with the nomination. Only electronic submissions will be considered. Nominations may include links to supplemental materials that clearly demonstrate one or more of the nomination elements.

### **Selection Process**

An Award Review Panel<sup>2</sup> is appointed by the ESCOP Diversity Catalyst Executive Committee to review nominations and recommend the recipient to the ESCOP Chair and NIFA Director. Upon the recommendation of the Award Panel, an award may not be given every year. The process would be completed by May 1, 2018.

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<sup>2</sup> The inaugural Award Review Panel is the Chair-Elect, one Director, a NIFA representative, a diversity and inclusion professional, a representative from an allied organization or a faculty member designated by a director who has demonstrated commitment to diversity and inclusion. In future years, the previous award recipient could serve in the faculty representative capacity.

## **Policy Board of Directors Agenda Brief**

**Created by Gary Thompson and Eric Young for the March CARET/AHS Meeting**

**Presenter: Jeff Jacobsen**

**Action requested: For information only.**

The BAA Policy Board of Directors met on November 14 in Alexandria, VA. The two agenda items below will be discussed. The next PBD meeting will be on March 21 in San Antonio, TX

1. Communications and Marketing Committee as Policy Board of Directors Standing Committee
  - Recommendation is to appoint the CMC now as an ad hoc committee of Policy Board of Directors and work toward making it a standing committee
  - ACOP and ESCOP are supportive of recommendation
  - ECOP has concerns about their specific role relative to strategic communications in the best interest of the LGU system
  - Policy Board of Directors needs to determine what the charge of the ad hoc Communications and Marketing Committee should be
    - Subgroup composed of Policy Board of Directors members (or designee) plus Bev Durgan and Faith Peppers will study this and make recommendations in March
2. PBD Strategic Plan of Work
  - The 2017-2022 PBD Plan of Work has the following goals and planned actions. Each Section or unit represented on the PBD reports annually in the fall on its activities related to these actions
  - PBD Plan of Work

### **Current and Emerging Issues and Future Directions**

#### Goal:

- Identify current and emerging local, regional, national, and global opportunities and challenges and facilitate strategic discussions and actions that will impact and guide future directions for the System.

#### Actions:

- Encourage the various Sections within the BAA to frame strategic approaches to integrate, prioritize, and address existing and anticipated future opportunities and challenges in learning, discovery, and engagement.
- Provide forums to engage the System and external partners in strategic dialogues to develop recommendations on policy and System-wide approaches for action to address current and emerging issues.

### **Resource Advocacy**

#### Goal:

- Seek additional resources for the System through collaborations, partnerships, communications, marketing, budget development, and advocacy.

#### Actions:

Support the Budget & Advocacy Committee (BAC) in its budget development and advocacy efforts, including:

- Developing the System's federal budget request and associated messages with target audiences.
- Communicating and vetting the BAC's message throughout the System and stimulating and supporting dialogue among the BAA sections.

- Coordinating marketing and communication efforts across the BAA and among learning, discovery, and engagement leaders.
- Fostering understanding of the rationale for budget requests and gaining commitment for them.
- Using the BAA's contracted advocacy and communication and marketing firms effectively by setting and providing oversight for achievement of measurable goals.
- Including System members and constituent groups (e.g. CARET, professional societies, commodity organizations, and other user groups) in the development and implementation of advocacy strategies.
- Facilitating development of a strategic communications and marketing plan to enhance the public's understanding of the System's impacts on social, environmental, and economic issues at the community, national, and international levels.
- Identifying and cultivating legislative Congressional champions.
- Building and deepening relationships across all missions with the National Institute for Food and Agriculture (NIFA).
- Seeking and establishing mission-critical relationships with other appropriate federal and state agencies including the Foundation for Food and Agriculture Research (FFAR).
- Identifying and recommending new national-level collaborators and partners and fostering mutually beneficial relationships with them.

#### **Authorizing Legislation and Associated Action**

##### Goal:

- Develop and support policies and legislative action and subsequent implementation that enhance the System's ability to carry out its missions and increase the federal investment in the System over the life of the Farm Bill.

##### Actions:

Support the Committee on Legislation and Policy (CLP) in its efforts to guide Farm Bill and other appropriate legislation development, passage, and subsequent implementation, including:

- Positioning the System for new opportunities.
- Developing appreciation within key federal agencies of the System's capabilities.
- Identifying and cultivating legislative champions.
- Forming implementation teams to work with appropriate federal agencies.
- Monitoring rules as they are developed and published.
- Keeping the System informed of new opportunities and funding mechanisms presented as new legislation is implemented.
- Monitor legislation and policies that may enhance or impede the System's progress and work with decision makers to make modifications where appropriate.

#### **System Integration**

##### Goal:

- Enhance integration of goals and activities among BAA members and between the BAA and other groups within APLU's structure to gain synergy from collaborative actions.

##### Actions:

- Develop a public value message to describe and communicate collective BAA impact.
- Encourage efficiencies between and among federal agencies for learning, discovery, and engagement.

- Continue communication among Policy Board of Directors members to find common ground and enhance integration of efforts.
- Support events and other opportunities that promote cross-Section communication and collaboration.
- Work with APLU staff and BAA Executive Directors and Administrators to ensure appropriate and effective linkages between the BAA and other groups within APLU.
- Recognize excellence throughout the System through support of national awards and recognitions.
- Support leadership development within the System, particularly through the Food Systems Leadership Institute (FSLI) and LEAD-21.
- Support diversity and inclusion across the System in all decisions and actions.

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## ESCOP Website Update

Created by David Leibovitz, Jeff Jacobsen for the March CARET/AHS ESCOP Meeting

Presenter: Jeff Jacobsen

Action Requested: For information only

ESCOP Website URL: <http://escop.info>

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Since October 2017, ESCOP's new website has been using Google Analytics to gather user location and activity data across all pages on <http://escop.info>. Most of the website's audience (79%) resides in the United States. The numbers below are focused on US-based website visitors from October 01, 2017 to March 01, 2018.

- 567 unique users have visited <http://escop.info>
  - 983 sessions have been initiated (1.73 sessions per user)
  - 50 states + Washington, DC are represented across US-based visitors
  - Users from the top 10 states (in order of use - VA, DC, NJ, CA, OR, NC, TX, MD, WI, FL) account for 35% of site visits
  - 79% of users are visiting beyond the escop.info home page
  - Most visitors are reaching Committees, Calendar Events, and About ESCOP pages
  - Session activity has hovered between 140 – 295 visits per month (see below)
  - New @escop.info committee Listservs have gone live, but issues are encountered by users at multiple institutions
  - Regional offices are working with Clemson's team on a case-by-case basis to address Listserv issues.
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What's next?

- The ESCOP website is consistently active, but can still grow
- The regional associations will continue to utilize the site to make it as active and current as possible
- If you have other needs, please bring them up to the regional offices and we will address them accordingly
- Encourage colleagues to use the ESCOP website
- If you serve on an ESCOP committee:
  - VISIT committee pages
  - UPLOAD content to committee pages for posting and distribution
  - LINK to committee pages in email correspondence
  - CONTACT regional offices to upload content and schedule events

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## COGR Hemp (Latest Draft)

Dear Members of Congress,

The Council on Governmental Relations (COGR) is a non-profit association of 190 research universities and affiliated academic medical centers and independent research institutes. COGR concerns itself with the impact of Federal regulations, policies, and practices on the performance of research conducted at its member institutions.

We are writing on behalf of our member institutions to express our concern that, despite some recent changes to Federal law intended to facilitate legitimate research on *Cannabis sativa* (specifically, changes intended to allow certain research on the low-THC variety of cannabis known as industrial hemp), significant legal, regulatory, and procedural impediments remain that prevent or make it difficult for researchers to contribute to public knowledge in this area. We believe that removing barriers to research is critical to advancing the public interest, and urge you to continue work with the research community to identify and advance potential solutions via legislation (and/or via working with relevant Federal agencies to promote regulations and guidance that remove barriers to research).

There is an increased urgency for robust research on *Cannabis sativa* and certain substances that may be derived from cannabis (such as cannabinoids other than THC, including Cannabidiol ["CBD"], cellulose, essential fatty acids and proteins), especially as an increasing number of states have legalized both medical and non-medical use of cannabis as well as cultivation of industrial hemp. While we have broad concerns about the significant impediments to conducting research on all types of cannabis (including marijuana), the specific focus of this letter is on the barriers to conducting research on industrial hemp, industrial hemp materials and industrial hemp products.

Although the Agricultural Act of 2014 (the "Farm Bill") included a provision (Section 7606, enacted as [Title 7 U.S. Code §5940](#), "Legitimacy of industrial hemp research") authorizing institutions of higher education and state departments of agriculture to cultivate industrial hemp for research, our institutions still face significant challenges in moving ahead with such research. These challenges stem in part from the overbreadth of the Controlled Substances Act's definition of "marihuana," especially as it relates to industrial hemp materials and products., and in part from Federal agency regulations and guidance that appear to impede the intent of Congress to allow certain research on industrial hemp (or, at least, that create substantial confusion as to what is permissible).

In order for research to move ahead in this area, we believe there is a need for clear Federal guidance specifying that researchers may obtain and work with industrial hemp seed, cultivars, and "all parts of the plant" (such as extracts/derivatives) without having to go through the lengthy process of obtaining a Schedule I DEA registration.

But such clear guidance is lacking. While the "Multi-Agency Statement of Principles on Industrial Hemp" (SOP) issued in August 2016 may have been intended to provide such guidance, in fact, it introduced a definition of industrial hemp that is inconsistent with the definition provided by the Farm Bill. In addition, the DEA's "Clarification of the New Drug Code (7350) for Marijuana Extract" issued in December 2016 created concern inasmuch as it appears to sweep industrial hemp extracts into the

same Schedule I category as marijuana extracts. This too seems inconsistent with Congressional intent to permit research on industrial hemp.

The Controlled Substances Act (CSA) as written provides ***no delineation between industrial hemp, cannabinoids (chemicals derived from the cannabis plant) and marijuana/cannabis plants***, thereby contributing to confusion and uncertainty with respect to whether a researcher conducting research using industrial hemp or industrial hemp derivatives might be imputed to have committed a criminal offense for performing research without a Schedule I registration.

In Title 7 U.S. Code §5940 “Legitimacy of Industrial Hemp Research, the U.S. Congress provided that ““industrial hemp” means the plant *Cannabis sativa* L. and any part of such plant, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.”

The DEA “[Clarification of the New Drug Code \(7350\) for Marijuana Extract](#)” states that “the new drug code (7350) established in the Final Rule does not include materials or products that are excluded from the definition of marijuana set forth in the Controlled Substances Act (CSA).” And, according to the CSA, the term ‘marihuana’ “does not include the mature stalks of such plant, fiber produced from such stalks, oil or cake made from the seeds of such plant, any other compound, manufacture, salt, derivative, mixture, or preparation of such mature stalks (except the resin extracted therefrom), fiber, oil, or cake, or the sterilized seed of such plant which is incapable of germination.” 21 U.S.C. § 802(16).

Further, the DEA’s clarification states, “if a product consisted solely of parts of the cannabis plant excluded from the CSA definition of marijuana, such product would not be included in the new drug code (7350) or in the drug code for marijuana (7360).” By our interpretation this clearly means that, according to the DEA, CBD and other cannabinoids and extracts taken from portions of the plant excluded in the definition of marihuana by the CSA would fall outside of Schedule I regulation. However, the characterization in the CSA and the New Drug Code remains overbroad and, when taken with the definition in the Multi-Agency SOP, continues to contradict the definition of ‘industrial hemp’ as a plant separate from and independent of ‘marihuana’ as defined under the CSA.

By providing this distinct definition of ‘industrial hemp’, separate and independent of ‘marihuana’ under the CSA, Congress has acted to remove industrial hemp and all of its derivative products from enforcement and regulation under Schedule I and the CSA. This position is supported by the recent [Amicus Brief](#) filed with the U.S. Court of Appeals for the Ninth Circuit and signed by 28 U.S. legislators who worked on and voted to pass the Hemp Bill, including Sen. Rand Paul, R-KY, Sen. Ron Wyden, D-OR, and Rep. Jared Polis, D-CO, in support of the [Hemp Industries Association lawsuit against the DEA](#).

The contradicting definitions and lack of clarity regarding industrial hemp materials leaves researchers uncertain whether work with industrial hemp materials without a Schedule I license is a criminal offense. At immediate issue is the approaching growing season for authorized hemp growers/farmers. Farmers need to place orders for seed by the end of February. As an action toward ensuring that research of industrial hemp materials pursuant to pilot programs does not violate the CSA and in light of the confusing and contradictory federal definitions noted in this letter, we urge and need clarification that:



- Institutions of higher education (and state departments of agriculture) conducting research may transfer and receive industrial hemp seed and cultivars between and within states with legalized programs within the U.S. without the need for either a DEA registration or a DEA import license,
- Authorized institutions of higher education (and state departments of agriculture) conducting research need not apply for a separate DEA Schedule I permit in order to obtain and work with industrial hemp seed and cultivars for research purposes.

Respectfully,

cc.

Attorney General Jeff Sessions

Deputy Attorney General Rod Rosenstein

Secretary Sonny Perdue

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### **Item 17.3: NCRCD Update for the NCRA**

**Presenter: Mark Skidmore**

**Action Requested: For information**

The North Central Regional Center for Rural Development had another productive year. Below, I provide a summary of activities beginning with the NC1100 project, which is directly supported by the NCRA. This is followed by a summary of Land Grant University research university-tribal college matching project, which was emerged from our conversations during last year's NCRA meeting. Other notable activities follow. I am happy to answer any questions by e-mail or during the meeting in St. Louis.

#### **NC1100 "Innovations in Agriculture" Project**

NC1100 members John Mann, C.Y. Wang, Scott Loveridge, Martin Kinney, and Mike Ladisch are revising a Research Coordination Network (RCN) NSF proposal that will connect groups of researchers and industry on new collaborations focused on innovation and rural development—this effort will be a primary topic for the next NC1100 meeting (tentatively set for June 2018). A feature of the innovation adoption and creation component is the opportunity to connect university developed technology, rural and agricultural firms, and new R&D funding such as from the Small Business Innovation Research (SBIR) program. In May 2017, a pilot introduced through *Innovations in Agriculture and Rural Development* series connected University of Wisconsin aquaculture researchers to Blue Ridge fish hatchery in North Carolina (series primary mission), and this new collaboration is pursuing a phase I SBIR award with coaching from Mann (new feature/pilot). The idea of the RCN is to incorporate (1) the faculty-firm/industry collaborations and (2) researchers, industry leaders, and government entities interested in these collaborations into a broader network.

The NC1100 team continues its work on the AFRI competitive grant awarded in 2016. One aspect of this includes members partnering with the USDA's Economic Research Service to do additional analysis of a 10,000 firm national survey of innovation practices. One preliminary analysis of the survey led to a new effort to evaluate the impact of the USDA SBIR program as well as other agency managed programs (e.g., NSF, DOD, NIH). While this activity is currently in progress, results of this evaluation are the first known attempt to compare the influence of different agency managed SBIR programs on rural and urban firm innovation. This effort is complimented by Mann's other activities related to the USDA SBIR program (collaboration with the WRDC on the national-level extension effort to encourage and increase the quality and quantity of USDA SBIR applications—especially among women and minority owned firms; phase I and II USDA SBIR panel reviewer; and firm/faculty SBIR coach).

The NC1100 project developed 6 research papers (3 were based on the USDA ERS survey) which were presented at the annual meetings of: (1) the Midwest Economics Association (1 paper); (2) Mid-Continent Regional Science Association (3 papers); (3) Agricultural and Applied Economics Association (1 paper); and (4) the North American Regional Science Council (1 paper). One has been accepted for publication in the *Journal of Regional Analysis and Policy*. Preliminary findings from this body of work include: (1) patents, relative to 39 other potential innovation metrics, remain a reasonable measure for innovation creation; (2) once controlling for firm, industry, and state characteristics, the differences between innovative rural and urban firms with high-levels of innovation creation disappear; (3) university R&D expenditures positively influences rural firm innovations creation, though the rural firms

may not recognize the value of the university; and (4) while California is the benchmark for innovative urban firms, there are several states that appear to outpace California in terms of high-tech rural firms.

### **Tribal College Matching Project**

NC1100 member John Mann is working closely with John Phillips (American Indian Higher Education Consortium) to facilitate new collaborations between researchers at 1994 and 1862 land grants. The team was given the green light from the MSU Internal Review Board (IRB) on its research methodology and interview questions, and is expected to begin initial interviews with potential participants in late January. The idea is to incorporate in-depth interviews and the “fast-pitch” platform piloted last year, to identify and encourage new collaborative opportunities for researchers. Mann and Phillips also anticipate that at least one of the project participants will join the NSF RCN proposal team (described above).

### **Other Updates**

#### **NCRCRD Board Member Composition**

Richard Todd and CY Wang are cycling off the Board—we thank them for their valuable contributions over these past several years.

We welcome [Gary Wagner](#) (Federal Reserve Bank of Cleveland) and [Joe Parcell](#) (University of Missouri).

#### **Asian and Pacific Island Language and English Proficiency Resource Center (AAPILEPRC)**

Remaining grant funds for the AAPILEPRC have been supplemented with NCRCRD support in order to continue activities through the August 2018. We continue efforts to identify additional funding. In meantime, Pao Xiong continues translating materials and is identifying effective approaches for making such resources accessible to target audiences.

#### **At the Request of ECOP, Skidmore Is Serving as Coordinator of the Extension Opioid Crisis Response Workgroup**

The Extension Committee on Organization and Policy (ECOP) has established a workgroup to help coordinate the Land Grant University system response to the opioid crisis. Late last year, ECOP administered a survey to identify Extension efforts within individual states to learn more about evidence-based programs being used across the country. The workgroup will assist in developing a system-wide strategic plan (including implementation strategies) to address the crisis. Mark Skidmore of the North Central Regional Rural Development Center is partnering with NIFA in an Extension Opioid Crisis Response Workgroup. The workgroup has identified a set of activities that will culminate in the writing of a report for ECOP, which we anticipate will be completed within a six month period. The workgroup has a strong partnership with NIFA, represented by Ahlshia Shipley and her colleagues. Ahlshia is also working with USDA’s Rural Development office on this effort. Last week, USDA launched a webpage highlighting resources to help rural communities address the opioid crisis: <https://www.usda.gov/topics/opioids>.

## CAPE Project News

The Community Assessment and Education to Promote Behavioral Health Planning and Evaluation (CAPE) project was granted a final no cost extension, which will close out the project in August 2018. To date, we have completed all the core elements of the original grant assignment. However, SAMHSA contacted us in June 2017 to request that we work on an additional assignment to identify the contact information within each state for offices responsible for compiling/collecting county level data on behavioral health indicators. The details of this additional assignment are provided below.

In 2016 the Council of State and Territorial Epidemiologists (CSTE) recommended the collection of a set of 18 behavioral health indicators at a county level, with the intent of instigating the development of a national behavioral health surveillance system. There are many challenges to implementing a county-level national behavioral health surveillance system, and many of those challenges are being identified and addressed through pilot testing the collection of these data in a select small group of sites.

An additional challenge to collecting and reporting these data is that many times the data are managed by different agencies and bureaus within a state. Unlike infectious diseases, for example, which are in large part the domain of the State Epidemiologist, the data collection, management and reporting of these 18 indicators are not necessarily under the same authority, and may often be in an agency unassociated with the state health department.

Understanding the reporting authorities for each of these 18 indicators in each of the state and jurisdictional health authorities is critical to begin to link the data in meaningful ways.

The task will require the completion of an inventory, either via direct contact, google searches, etc., to accomplish a census of data collection, authority and reporting mechanisms in each state, including but not limited to the agency with responsibility and that agency's association (or lack of association) with the state public health authority.

At least one paper should be completed, accompanied by a report to SAMSHA. SAMHSA staff will assist in co-authoring the paper for peer-reviewed journal publication.

We have now completed the new assignment, and we hope to present the finding of this new assignment at the Council of State and Territorial Epidemiologists annual meeting in June 2018.

## Other CAPE Updates

The following information provides an update on various activities from October 2017 through December 2017.

- Nationwide Mental Health Literacy Survey:

Seven research papers using data generated from the mental health literacy survey are in development, one of which is submitted to a refereed journal. Other papers are in progress and we anticipate submitting them to refereed journal outlets over the next few months.

- **Google Trends Research**

We are hoping to finalize a second Google Trends analysis of suicide, alcohol- and drug-related fatalities by gender in the coming months.

- **Building Community Behavioral Health Awareness**

We have completed a draft report on “Lessons Learned from Building Community Behavioral Health Awareness and Innovations for Solutions”, which provides an overall assessment on the CAPE index and innovation community experiences. Several of the community experiences have the potential to be written up into individual refereed journal articles. This document is provided in a separate attachment.

- All remaining funds have now been used. I had anticipated having some remaining funds to host a workshop to highlight the outcomes of the grant and identify possible next steps, but funds are insufficient to host such an event. However, the North Central Regional Center for Rural Development has allocated resources to host a workshop explore the nexus between health and community development. I am planning to integrate some of the CAPE project into that workshop and invite key CAPE supporters and participants to that event, which will be held in spring 2018.

### **North Central Community Development Program Leaders Special Project**

The NCRCD is providing funding to the North Central region’s community development program leaders to support development of a larger multi-state grant proposal centered on community and economic development initiatives. These resources are being used for preliminary research, travel for meetings other needs to complete a significant multi-state grant proposal. The group met in Detroit last fall to begin developing a plan and larger proposal. The group is developing a North Central regional effort to learn and develop programs for expanding community capacities.

### **Post-doc Updates**

New Post-doc Allison Brennan has begun her work; she is located at North Dakota State University and her primary areas of coverage will be ND, SD, NE, and KS. Dr. Gary Gorehan and Lynette Flage are serving as mentors. If Mark is formally asked to coordinate the Land Grant system opioid effort, Allison will assist in this effort (Allison has a strong background in health).

Post-doc Annabel Ipsen is back to work where she is developing a grant proposal “Building Health Resilience in Distressed Communities”. Annabel, Mark and graduate student Jungmin Lim plan to work together to consider resilience in the context of the opioid crisis, obesity and weather-related natural disasters.

### **Broadband Working Group**

The NCRCRD is partnering with the SRDC to support a group of educators focus on rural broadband adoption and use. The group is meeting in Detroit on January 8-10.

### **Pension Special Project**

The special project evaluating the local impacts of potential pension benefit reductions is complete and can be found at [http://ncrcrd.msu.edu/uploads/files/Pension\\_Report\\_17.pdf](http://ncrcrd.msu.edu/uploads/files/Pension_Report_17.pdf).

### **Poverty Special Project**

The special project examining poverty in the North Central region is near completion...report available soon.

### **Rural Health-Development Nexus Workshop**

The NCRCRD will be hosting workshop on the nexus between health and economic development. The event will be held on April 27, 2018 at the Federal Reserve Bank of Minneapolis. The workshop will bring together researchers and outreach specialists with expertise in the health arena and the economic development arena with goal of encouraging collaborations across disciplines within the Land Grant University system. During the workshop we will identify gaps in knowledge and programming regarding the connections between health and economic development. We will discuss this activity during the call...note that the workshop will take place the day after the NCRCRD Board meeting.

### **New USDA Rural Health and Safety Education Grant**

The NCRCRD has partnered with Purdue (lead), Indiana, Iowa, South Dakota, and Kansas in a new USDA Rural Health and Safety Education (RHSE) \$300k grant fund project "a multi-state effort of opioid abuse prevention using SFP10-14. As part of this effort, the NCRCRD will be hosting a series of webinars on opioid use and misuse.

### **New SBIR Grant**

The NCRCRD is working with The WRDC (lead) and the other two regional rural development centers on a new USDA Small Business Innovation Research (SBIR) grant funded activity to train extension educators to assist small business owners in developing high quality SBIR grant proposals.

## 2017-2018 NCRCRD Small Grant Projects

The following projects are now underway:

### Small Grant Principal Investigators, States, and Project Titles

PI	PI State	Proposal Title
Holly Arp	Minnesota	Leading Change in a Global World
Andrea Bjornstad	South Dakota	Rural Mental Health: Understanding Stress and Depression in Farmers and Ranchers
Steven Deller	Wisconsin	Current Thinking in Rural Economic Growth and Development
Rene Rosenbaum	Michigan	Examining HSIs and EHSIs and the Potential for Institutional Cooperation for Latino Community Development
Bradford Wiles	Kansas	Quality, affordable child care as economic development in rural communities
Wynne Wright	Michigan	Diversifying with Lavender: Resources, Training, Networks for Commercial Lavender Producers
Erin Yelland	Kansas	North Central region Aging Network Toolkit Development
David Ivan	Michigan	Starting and Managing Community Supported Enterprises

## Research Updates

### Book/Book Chapter

Rural Housing and Economic Development (edited by Don Albrecht, Scott Loveridge, Stephan Goetz and Rachel Welborn) Routledge, New York, 2017.

Dyar, W., Lim, J., and Skidmore, M. Manufactured Home Living across Rural America, in Rural Housing and Economic Development.

### Articles

Bloem, Jeffrey, and Scott Loveridge. 2017. "The Secondary Migration of Refugees Resettled in the U.S." *Forced Migration Review*. January. Also published in Arabic [www.fmreview.org/ar/resettlement](http://www.fmreview.org/ar/resettlement); French [www.fmreview.org/fr/reinstallation](http://www.fmreview.org/fr/reinstallation); and Spanish [www.fmreview.org/es/reasentamiento](http://www.fmreview.org/es/reasentamiento)

Clark, Jill, Molly Bean Smith, Samina Raja, Scott Loveridge, Julia Freedgood, and Kimberly Hodgson. Cooperative Extension and Food System Change – Goals, Strategies, and Resources. 2017. *J. of Ag. and Human Values*. 34:301. DOI: 10.1007/s10460-016-9715-2.

Cuthbertson, Courtney, Don E. Albrecht, and Scott Loveridge. 2017. Rural versus Urban Perspectives on Behavioral Health Issues and Priorities. *Community Development*. 48(4): 515-526.

Hodge, T., Sands, G., and Skidmore, M. 2017. [The Land Value Gradient in a \(Nearly\) Collapsed Urban Real Estate Market](#), *Land Economics*, 93 (4), 549-566

Gemmell, N., Grimes, A., and Skidmore, M. 2017. Do Local Property Taxes Affect Building Development? Results from a Quasi-Natural Experiment in New Zealand. *Journal of Real Estate and Financial Economics*.

Hodge, T., McMillen, D., Sands, G., and Skidmore, M. 2017. [Assessment inequity in a declining housing market: The case of Detroit](#), *Real Estate Economics* 45 (2), 237-258.

Lee, Gi-Eu, Scott Loveridge, and Satish Joshi. 2017. Local Acceptance and Heterogeneous Externality of Biorefineries. *Energy Economics* 67: 328-336.  
<https://doi.org/10.1016/j.eneco.2017.08.013>.

Lee, Gi-Eu, Steven R. Miller and Scott Loveridge. 2017. “Modelling Local Food Policy and Greenhouse Gas Emission due to Transportation.” *J. Regional Analysis and Policy* 47(1): 75-87.

Lim, J., Loveridge, S., Shupp, R., and Skidmore, M. 2017. [Double danger in the double wide: Dimensions of poverty, housing quality and tornado impacts](#), *Regional Science and Urban Economics* 65, 1-15

Paredes, D. and Skidmore, M. 2017. [The Net Benefit of Demolishing Dilapidated Housing: The Case of Detroit](#), *Regional Science and Urban Economics*.

Parker, J., Cuthbertson, C., Loveridge, S., Skidmore, M., Dyar, W. 2017. [Forecasting state-level premature deaths from alcohol, drugs, and suicides using Google Trends data](#), *Journal of affective disorders* 213, 9-15.

Reese, L., Skidmore, M., Dyar, W., Rosebrook, E. 2017. [No Dog Left Behind: A Hedonic Pricing Model for Animal Shelters](#), *Journal of Applied Animal Welfare Science* 20 (1), 52-64.

Shupp, R., Loveridge, Skidmore, M., Lim, J., and Rogers, C. 2017. [Trust and Patience after a Tornado](#), *Weather, Climate, and Society* 9 (4), 659-668.

Shupp, R., Loveridge, S., Skidmore, M., Lim, J., and Rogers, C. 2017. [Risk, Loss, and Ambiguity Aversion after a Natural Disaster](#), *Economics of Disasters and Climate Change* 1 (2), 121-142.

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Appendix A: MRC Detailed Table	MRC Lead Reviewer	Current Proj # (Temp #)	Title	MRC Revisions/Recommendations
<b>14.1: New/Renewal projects</b>				
	Greg	NC2040 (NC_temp2040)	Metabolic Relationships in Supply of Nutrients for Lactating Cows	<p>This is a productive group that is led by investigators that are the leading experts in metabolic relationships in the supply of nutrients to lactating cows. It has delivered timely new information regarding the feeding and metabolism of the dairy cow over a period of many years. The group has done an excellent job with succession of scientists as many of the original participants over the past 10 years have retired or will be retiring. Yet participation in this project remains strong.</p> <p>The NC2040 has been the primary group to develop modeling for nutrition of dairy cows and their results have need used by the National Academies group developing nutritional guidelines for lactating dairy cows.</p> <p>Objectives of the proposed project are:</p> <ol style="list-style-type: none"> <li>1) Quantify properties of feeds that determine the availability and utilization of nutrients critical to milk production</li> <li>2) Quantify metabolic and molecular interactions that alter synthesis of milk components</li> <li>3) Use the knowledge of feed properties and metabolic and molecular quantitative relationships to challenge and refine precision feeding systems for dairy cattle.</li> </ol> <p>The proposal is well written and clear, but focused around the efforts of CA, FL and VA, with some mention of MI. The proposal could be strengthened by specifically detailing the interdependence of stations and why a multi-state project is needed to address larger questions, i.e. what outputs and outcomes rely on the collective work of more than one station. The team should also more clearly define how data will be exchanged among project team members and how resources will be shared to best complete the work.</p> <p><b>Recommend accept with minor revision</b></p>

	Hector	NC1170 (NC_temp1170)	Advanced Technologies for the Genetic Improvement of Poultry (was NC-168)	<p>The meat and egg poultry industries in the US and worldwide are vertically integrated operations composed of breeding companies, growers and producers. The US poultry industry is the world's largest producer of poultry meat and a major producer of eggs thus contributing enormously to the US economy. The overarching goal of this regional research project is to explore fundamental biological mechanisms using the most advanced technologies available to generate new knowledge to improve the genetics, breeding and the sustainable commercial production of poultry. A crucial and positive outcome of this regional project is that their members are often involved in the developmental stages of technologies and engage the project community members to employ these new technologies. In addition, this group has engaged effectively in the coordination, creation, maintenance and sharing of multiple poultry breeding lines (random bred populations, specific pathogen free, MHC-congenic, highly inbred, closed populations and specific trait divergent lines) that are invaluable resources for interdisciplinary research. During the first 5-year cycle of this regional project (13-17), members from the participating institutions published 300 articles in peer reviewed journals, 24 presentations published in symposium proceedings, 17 books or book chapters and generated 17 MS theses or Ph.D. dissertations. The objectives of the current project proposal are to: 1) create and share data and technology to enhance the development and application of genomics, epigenomics, and systems biology in poultry; 2) facilitate the creation and sharing of poultry research populations and the collection and analysis of relevant new phenotypes including those produced by gene editing; and 3) elucidate genetic mechanisms that underlie economically important traits, including genetic variants and functional regulatory elements within the genomes of poultry species, and develop new methods to apply that knowledge to poultry breeding practices. Reviewers were satisfied of the past accomplishments and extremely supportive of the project renewal emphasizing the productivity, discoveries and the strong collaboration of the researchers in this multistate project. The reviewers indicated that the section (II.3b) asking for a description of how duplication of activities with other poultry genetics-related projects will be minimized requires revision and also highlighted the lack of literature citations on the methods section. All meetings reports are current and informative.</p> <p><b>Recommend to approve with minor revisions.</b></p>
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	George	NC2042 (NC_temp2042)	Management Systems to Improve the Economic and Environmental Sustainability of Dairy Enterprises	<p>The overarching goal of this multistate renewal project is to provide dairy farmers utilizing different production systems with necessary knowledge and tools to help ensure economic and environmental sustainability. This goal remains highly relevant to the dairy industry. While very broad and comprehensive in scope (calf and heifer growth and development, dairy cow performance and well-being and whole farm system components), there is a strong history of productivity associated with this project. Objectives of the renewal project are: 1) Optimize calf and heifer growth and development by improving feeding strategies, management systems, well-being, new technologies, and environmental impacts for productivity and profitability, 2) Optimize dairy cow performance and well-being by improving nutrition, forage utilization, technology, and management, and 3) Evaluate whole farm system components and integrate information and technology to improve efficiency, profitability, environmental sustainability and social responsibility. Such objectives are very similar to objectives of previous project. While the scope of the project is very broad, the proposal lacks significant justification of individual objectives and for similarity of objectives of renewal proposal with previous project. Discussion of related, current and previous work lists results of previous studies, but context relative to ongoing challenges of the dairy industry is not well explained. Significant questions to be addressed to justify objectives of renewal project are not well developed. This section should clearly illustrate results derived from the previous project. When such results actually represent a collaboration between multiple stations should be emphasized. This will further justify renewal and collaborative efforts derived from the project versus activity of individual stations. Another significant limitation of the renewal proposal is there is no documentation that a CRIS search was conducted to identify overlap with other projects. Given breadth of project illustrated above and host of research areas addressed (e.g. nutrition, management, calf health, feeding systems, energy consumption, environmental sustainability), this should be addressed during proposal revision. <b>Recommend major revision and re-review.</b></p>
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	Hector	NC213 (NC_temp213)	Marketing and Delivery of Quality Grains and BioProcess Coproducts	<p>The US grain industry has to cope with increase production capacity with an aging handling infrastructure and technologies that can impair the quality of grains destined for food and animal feed thus having potential detrimental impacts on the Nation (and world) food safety and security. Grain quality has become an increasingly important factor for domestic and international markets. Therefore, factors such as: efficiency of the supply chain; post-harvest storage practices and systems; processing and handling practices, non-invasive technologies to detect grain damage caused by diseases and/or insects; and image analysis to determine quality and processing characteristics are among the most pressing issues that this regional project has worked during its last 5-year cycle and that will continue to address. The overarching goal of this regional research project is to address critical, continuing issues in post-harvest grain quality focusing primarily on the supply chain for grains, oilseeds and their processed co-products. The objectives of the current project are to: 1) measure, model and address factors which influence quality and safety attributes in the postharvest usage, drying, handling, and distribution of cereal grains and oilseeds; 2) improve management and operational systems to increase efficiency, retain quality, enhance value, and preserve food safety in the farm-to-user supply chain; and 3) work with multi-institutional colleagues to improve the cereal grain and oilseed supply chain by creating measurable impacts that preserve quality, increase value, and maintain food safety/food security. The proposal for the next 5-year cycle (18-23) clearly defines the objectives, activities, the measurement of progress (milestones) and the achievement of results (outputs/impacts). The reviewers were very supportive of the project and highlighted the success, productivity and impact of the research conducted in benefit to the grains, oilseed, and byproducts industries. The reviewers liked the unique and strong public private partnership of this committee and that it helps tremendously to keep the research focused on the needs of the grain and oilseed industries. Reviewers indicated: 1) the need of having more economists participating in the project and the need to include a literature review section. All meetings reports are current and informative.</p> <p><b>Recommend to approve with minor revisions.</b></p>
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	Greg	NC2172 (NC_temp2172)	Behavioral economics and financial decision-making and information management across the lifespan	<p>The project team has identified an important problem and proposes to assess barriers and motivators that influence the decision-making process on the micro level (consumers) through a health and healthcare lens. The project will examine the consumption patterns and decision-making practices of families when the observed services are not necessarily consumed as a matter of choice. The relevance and aim is very strong. Understanding consumer decision making in light of high health care costs and associated health outcomes of decision making is much needed.</p> <p>Objectives of the proposed project are:</p> <ol style="list-style-type: none"> <li>1) Understanding family resource management under uncertainties over life span</li> <li>2) Identifying personal characteristics and contextual factors contributing to household financial and health decisions</li> <li>3) Understanding how financial capability affects household health decisions and outcomes</li> <li>4) Understanding how health conditions affect household financial decisions</li> </ol> <p>The proposal is thorough and well written. It would be helpful in the methods section to add detail on how the individual members will contribute to the work. This will help clarify the need for this project to be executed as a multistate project. How does the expertise at certain institutions support the work of the whole? Some of the types of statements that might be added could read “...scientists at Purdue and Missouri will have responsibility for ....” or “Kansas State University, University of Florida, and Georgia will...”. Please also develop a description of how the proposed research will reveal lead to actionable information.</p> <p><b>Recommend accept with minor revision</b></p>
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	Bill	NC2169 (NC_temp3169)	EFNEP Related Research, Program Evaluation and Outreach	<p>The Expanded Food and Nutrition Education Program (EFNEP), a community outreach program begun in 1969, uses peer educators (paraprofessionals) to influence nutritional choices and physical activities of low-income families and combat obesity, food and economic insecurity and related health impacts. Currently funded at \$67M, the program operates through 1862 and 1890s LGU in 800 counties in every state and 6 U. S. territories. Representatives from twenty states participate in this project. The MRC proposes to update and refine qualitative and quantitative evaluation of EFNEP in six areas over the next five-year cycle; 24-hour dietary recall, Food and Physical Activity Questionnaire, Retrospective pre/post, Infant Feeding, Quality of Life and Cost Effectiveness. Given the program serves a population that is 40% Hispanic and 24% African American, emphasis on ensuring the evaluation instruments are culturally appropriate is justified. The first evaluation of non-dietary impacts in the 50-year history of EFNEP on peer educators and participants is welcome. I reviewed reports for the expiring version of this project in NIMSS. The participant group is dynamic, engaged and well connected with each other.</p> <p><b>Approve/continue as is.</b></p>
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	Jeff	NC_temp1207	Collaborative for Research on Food, Energy, and Water Education	<p>The project identifies a pressing need and unique opportunity to use the Food, Energy and Water (FEW) Nexus framework of complexities, while incorporating science literacy, systems thinking targeted to problem-solving and decision-making for a new and progressive workforce of learners. These collaborative efforts will be multidisciplinary, transdisciplinary and will holistically involve youth through adult human resources as improved research-based educational methods and interventions are developed and refined. Good selection of literature highlights. Participants in the NCDC231 did accomplish some key initial program steps and have already secured funding for their initial conference efforts which will help to fully define the opportunities. In addition, allied projects have been identified that will serve to provide data to seed the activities. A number of areas need to be strengthened to be consistent with core multistate project proposals. The proposers may want to connect with the North Central Region Water Network (<a href="http://northcentralwater.org">northcentralwater.org</a>) and consider engaging faculty at Lincoln University (1890 in Jefferson City, Missouri) to enhance the overall project. This is a highly relevant proposal and could greatly enhance our abilities to understand, adjust and enhance science literacy utilizing the FEW framework.</p> <p><b>ACCEPT with minor revision.</b> Under each Header below taken from the technical committee criteria (see Guidelines and Appendix H) are comments to be addressed. One reviewer asked that the prescribed format be reviewed and refined in the final submission.</p> <p>Issues and Justification – Paragraph 1 change NDCD to NCDC; Paragraph 4 and 5 this project would not be a new NCDC is would be a new NC technical committee; Probable impacts from developing the work could have some elaboration; and note that all regional projects will solicit nationally for participation, so there may be other members depending upon their willingness to initially be involved in NC issues.</p> <p>Related, Current and Previous Work – No evidence is provided that a CRIS search or a multistate project search via NIMSS was presented. This is a must do as it addresses duplication, efficiencies and accountability.</p> <p>Objectives –The objectives are stated as research questions rather than clearly defined goals. Consider refining.</p>
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				<p>Methods – The NCDC231 project will expire and this proposal as NC_temp1207, if approved, will become NC1207 and NCDC231 will be an archive. The actual (even in draft form) conference agenda and timetable does not need to be in the actual proposal as an overview is more than adequate. Given the current two objectives, if one does not get funding, then what? All multistate projects seek to secure funding in order to accomplish objectives. With the Project Research (Objective 2), a suite of activities are delineated, yet the collaborative and interdependence features are not clear. For example, are there common protocols and central data collection or analysis or other features that would describe synergistic approaches rather than an independent collection of data and so on? It is a normal feature that research responsibilities of all participants are clearly stated. Other than the Conference Agenda, the methods are vague and fail to distinguish how each approach would contribute to each Objective.</p> <p>Measurement of Progress and Results – In that this is a five-year project, it is common to include Milestones for each of the five years. It is important to link milestone-based plans to each objective and identify participant’s work. In addition, the Outreach component could be better developed.</p>
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	Jeff	NCCC307 (NCCC_temp307)	Biochemistry and Genetics of Plant-Fungal Interactions	<p>This Coordinating Committee project proposes to continue to understand fundamental concepts and underlying processes governing plant-fungal interactions through information exchange, interdisciplinary participation across the public and private sectors and other collaborative/coordinated activities. Outcomes from their productivity provide the necessary background, information and fundamental processes that will lead to enhanced management strategies against plant pathogens. This multistate group has evolved over nearly three decades of scientific inquiry. As such the proposal would be strengthened by providing examples of previous successful collaborations.</p> <p>Specifically to the NCCC evaluation criteria: The Objectives are clear and progressively building upon past work and work within this 5-year project period; Enhanced visibility and interactions with plant scientists focusing on true interactions would boost the achievements as genetics and biochemistry of plant-fungal interactions cannot be completed without understanding what the plant side (and field-based scientists) of the equation entails. In the next phase, it would be advisable to expand Objective #4; Past activity and the caliber and diversity of scientists should enable project success; This research addresses priority research and is not duplicative; This project is a collective and interdisciplinary effort across the public and private sectors, however the outcomes of coordination of activities has not resulted in joint publications/procedures/collaborations rather than a meeting for conversation, and As a CC project and Objective#5, "Explore new and collaborative funding possibilities to enhance activities" needs particular focus because it will help increase visibility of the program, help expand the educational activities of the effort, and enhance graduate education in the region; Attendance is good at prior meetings; and Public and Private sector stakeholders are directly involved leading to application of research findings.</p> <p><b>APPROVE/CONTINUE with normal (minor) revision following the changes noted above and below.</b></p> <p>In the Statement of Issues and Justification Paragraph four, line five there is an "of of" to be corrected.</p> <p>In scanning the Annual Reports for 2015-2016 the number of participants (and institutions) was noticeably more than in the</p>
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				<p>proposal. Presumably this will change when the project is approved and the request for participants is solicited.</p>
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	George	NCCC308 (NCCC_temp308)	Nutrition and Management of Feedlot Cattle to Optimize Performance, Carcass Value and Environmental Compatibility (NCT192)	<p>The overarching goal of this multistate research coordinating committee is to address nutrition and management issues related to performance, carcass value, and environmental sustainability of feedlot cattle operations. Participating states in this project represent the top ten states for feedlot capacity. The project has a strong record of accomplishment of regular meetings, strong collaborations, and providing relevant research based information to cattle feeders. Objectives of this renewal project are to: 1) Enhance the utilization of C from energy feeds to compete in an energy economy and improve national food security. Collaborating states include (IA, IL, IN, KS, MI, MN, NE, ND, OH, OK, PA, SD, TX, UT, WI), 2) Enhance the environmental sustainability of the feedlot industry through conservation and nutrient management. Collaborating states include (CO, IA, IL, IN, KS, MI, MN, NE, ND, OK, PA, SD, TX, UT, WI, OH), 3) Enhance the production efficiency and quality of feedlot cattle through management strategies and technologies. Collaborating states include (IL, IN, MI, MN, NE, ND, PA, TX, WI, OH) and 4) enhance management strategies that improves animal health and well-being. Collaborating states include (TX, CO, KS, OK, NE, IA). Objectives are well justified and have evolved from previous project to reflect current needs of the industry. Expected outcomes and impacts are clearly articulated and the education plan includes posting of research reports on project website. <b>Recommend approval.</b></p>
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	Bill	NCERA210 (NCERA_temp210)	Improving the management and effectiveness of cooperatively owned business organizations	<p>Agricultural cooperatives offer an effective mechanism the address challenges as the rural economy sector centered around small agricultural operations continues its precipitous decline. This project, active since 1988, developed four main objectives for the years ahead; an annual two day forum of academics and cooperatives personnel to identify and plan ongoing research, development and execution of research and publication activities related to multistate research on cooperatives, foster continued involvement of relevant disciplines on cooperatives research, maintenance of a website, continuing publication of the Journal of Cooperatives, and a multipronged dissemination of results plan and effort.</p> <p>The tightly knit collective of academics and cooperatives personnel, working closely together in a research-based effort with a solid information sharing network and extension plan characterizes this well coordinated and effective project. They are working on timely and critical issues, for example rural broadband access, that offer the best hope to stem the ebb tide of decline in rural agricultural communities.</p> <p><b>Approve/continue as is</b></p>
<b>14.2: Midterm Reviews</b>				
		NC1100	Enhancing Rural Development Technology Assessment and Adoption Through Land Grant Partnerships	Recommend continuation.
		NC1183	Mycotoxins: Biosecurity, Food Safety and Biofuels Byproducts (NC129, NC1025)	Recommend continuation

		NC1187	The Chemical and Physical Nature of Particulate Matter Affecting Air, Water and Soil Quality	Recommend continuation
		NC1023	Engineering for food safety and quality	Recommend continuation
		NC1184	Molecular Mechanisms Regulating Skeletal Muscle Growth and Differentiation	Recommend continuation
		NC1186	Water Management and Quality for Ornamental Crop Production and Health	Recommend continuation
		NC246	Ecology and Management of Arthropods in Corn	Recommend continuation
		NCCC134	Applied Commodity Price Analysis, Forecasting, and Market Risk Management	Recommend continuation
		NCCC52	Family Economics	Recommend continuation
		NCCC211	Cover crops to improve environmental quality in crop and biofuel production systems in the Great Lakes and	Recommend continuation

			Upper Mississippi basins	
		NCCC31	Ecophysiological Aspects of Forage Management	Recommend continuation
		NCERA197	Agricultural Safety and Health Research	Recommend continuation

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# Genome to Phenome

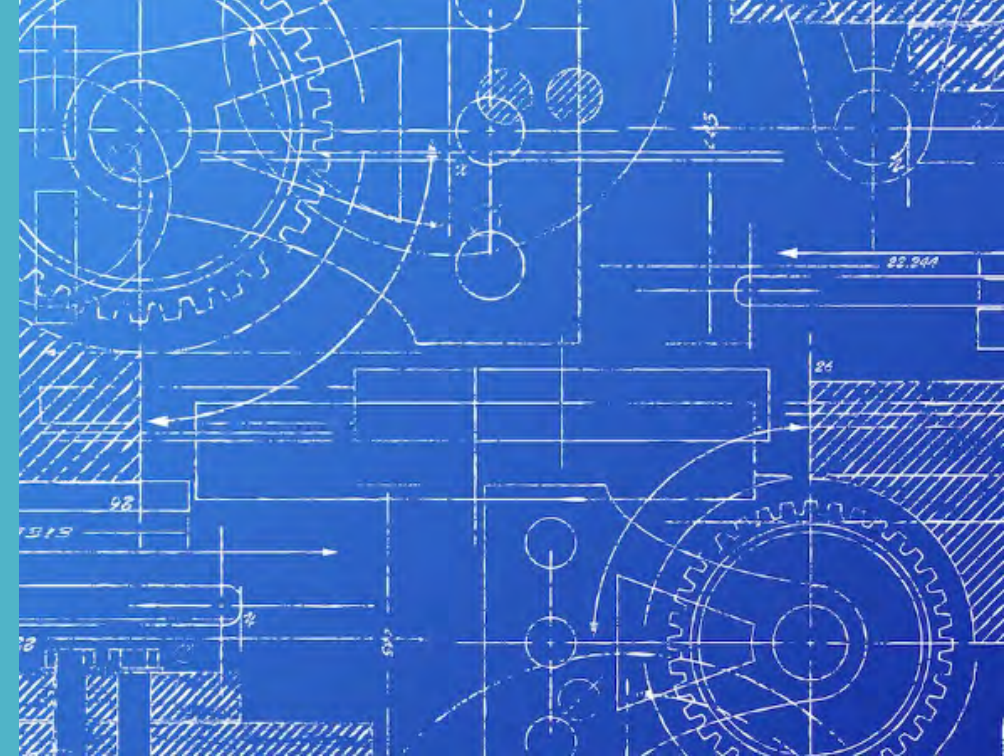
A USDA Blueprint for Animal Production  
2018 – 2027

Caird Rexroad, James Reecy and Zhiliang Hu



**IOWA STATE  
UNIVERSITY**  
Department of Animal Science

This effort is supported by AFRI grant 2017-67015-26907 project accession 1013525 from the USDA National Institute of Food and Agriculture, the ARS Office of National Programs and the National Agricultural Library.



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September 2007



# Blueprint for USDA Efforts in Agricultural Animal Genomics 2008–2017



Science to Practice  
Discovery Science  
Infrastructure

## *A word about the USDA Animal Genomics Strategic Planning Task Force:*

*Following the recommendation of the Interagency Working Group on Animal Genomics, a task force was established in January 2006 by USDA's Under Secretary for Research, Education and Economics, Joseph Jen. This task force was charged with developing a **Blueprint** for USDA efforts in agricultural animal genomics. Members include:*

Ronnie D. Green (Chair)  
National Program Leader  
Animal Production  
USDA-ARS

Muquarrab A. Qureshi (Co-Chair)  
National Program Leader  
Animal Genetics  
USDA-CSREES

Peter C. Burfening  
National Program Leader  
Animal Genome Programs  
USDA-CSREES

Hans H. Cheng  
Research Geneticist  
USDA-ARS  
Avian Disease and Oncology Lab  
East Lansing, Michigan

Noelle E. Cockett  
Dean  
College of Agriculture  
Utah State University  
Logan, Utah

Deb Hamernik  
National Program Leader  
Animal Physiology  
USDA-CSREES

Steven Kappes (Ex-Officio)  
Deputy Administrator  
Animal Production & Protection  
USDA-ARS

Mark A. Miranda  
National Program Leader  
Animal Reproduction, Growth, and  
Nutrient Utilization Programs  
USDA-CSREES

Anna C. Palmisano (Ex-Officio)  
Deputy Administrator  
Competitive Programs Unit  
USDA-CSREES

Daniel L. Pomp  
Professor  
Departments of Nutrition and  
Cell and Molecular Physiology  
University of North Carolina  
Chapel Hill, North Carolina

Gary A. Rohrer  
Research Geneticist  
USDA-ARS  
U.S. Meat Animal Research Center  
Clay Center, Nebraska

Curt Van Tassell  
Research Geneticist  
USDA-ARS  
Bovine Functional Genomics and  
Animal Improvement Programs Labs  
Beltsville, Maryland

James Womack  
Distinguished Professor  
Department of Pathobiology  
College of Veterinary Medicine and  
Biomedical Sciences  
Texas A&M University  
College Station, Texas



# 2008 - 2017 Infrastructure Goals

Assembled and Annotated Genomic Sequences:

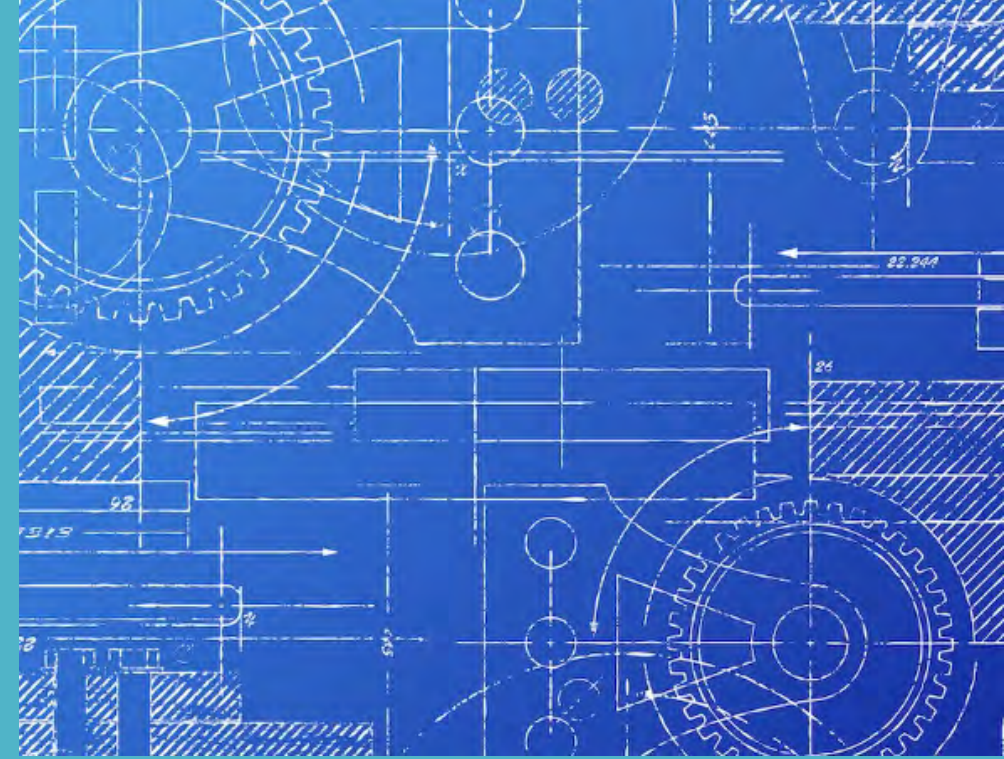
10X – cattle, chicken and swine

6X – catfish, equine, salmon, sheep, tilapia and turkey

2X – goat, oyster, shrimp and trout

# Blueprint Vision 2018 - 2027

- Collective Vision from the Animal Genomics Research Community
- Outreach
- Accountability
- Future Outcomes
- Inclusive of Species and Disciplines
- Identify Key Partnerships with other Communities



# Steering Committee

- ARS, University and Industry Representation
- Develop Pre-Workshop Draft Blueprint
- Identify Workshop Participants
- Identify Writing Teams
- Develop Workshop Format and Agenda
- Revise Post Workshop Draft Blueprint
- Revise based on Online Comments
- Provide Guidance thru to Publication

- ▶ Hans Cheng
- ▶ Noelle Cockett
- ▶ Cathy Ernst
- ▶ Janet Fulton
- ▶ John Liu
- ▶ Joan Lunney
- ▶ Jim Reecy
- ▶ Tim Smith
- ▶ Jerry Taylor
- ▶ Curt Van Tassell
- ▶ Jeffrey Vallet
- ▶ Lakshmi Kumar Matukumalli
- ▶ Caird Rexroad
- ▶ Janice Boarman
- ▶ Loren Coleman

# Blueprint Themes, Topics and Goals

## 1. Science to Practice

*a. Precision Selection and Management*

## 2. Discovery Science

*a. Genomic and Functional Biology*

*b. Host-Pathogen Interactions*

*c. Phenotyping*

*d. Microbiome and Metagenomics*

## 3. Infrastructure

*a. Genomic Tools and Resources*

*b. Education and Training*

*c. Bioinformatics and Computational Biology*

*d. Biotechnology*

*e. Animal Populations and Germplasm Preservation*

•Goal 1: Providing Nutritious Food to a Growing Human Population

•Goal 2: Increasing Animal Fitness and Improving Animal Welfare

•Goal 3: Improving Sustainability of Animal Agriculture

•Goal 4: Meeting Consumer Needs and Choices

# Genome to Phenome: An USDA Blueprint for Improving Animal Production

This workshop is an effort to update the previous report developed by the animal genomics community under the leadership of Dr. Ronnie Green (USDA-ARS) and Dr. Muquarrab Qureshi (USDA-NIFA) titled "Blueprint for USDA Efforts in Agricultural Animal Genomics 2008 – 2017". Over the last decade the vision outlined in this document has served to guide intra- and extramural research programs at USDA and in the broader international community. This workshop will revisit the progress made and develop meaningful and tangible goals for the next decade in developing the second generation blueprint for the animal genomics community.

- **About the Genome to Phenome Meeting**

- **Dates**

November 15-16, 2017

- **Venue**

USDA National Agricultural Library Beltsville, Maryland

- **Program**

Updated program is available

- **Hotels**

A meeting rate has been negotiated at a near-by hotel. Hotel/booking information will be provided upon your registration

- **Contact**

Click to send feedbacks.



## November 15, 2017 (Wednesday)

- 08:30 AM *Registration Open*
- 09:00 AM **Welcome**  
Dr. Caird Rexroad (USDA-ARS), Dr. Jeff Vallet (USDA-ARS) and Dr. Adele Turzillo (USDA-NIFA), Dr. Lakshmi Matukumalli (USDA-NIFA)
- 09:05 AM **Logistics**  
Dr. Caird Rexroad (USDA-ARS)
- 09:10 AM **The 2008 Blueprint for USDA Efforts in Agricultural Animal Genomics**  
Dr. Ronnie Green (Chancellor, University of Nebraska) 
- 10:20 AM **Implementing Blueprint at the USDA**  
Dr. Jeffrey Silverstein (USDA-ARS)   
Dr. Parag Chitnis (USDA-NIFA) 
- 10:40 AM **Implementing the Blueprint with Federal and International Partners (Introductions)**  
Dr. Jennifer Weller (DBI, NSF)  
Dr. Neelakanta Ravindranath (NICHD) and  
Dr. Dan Gilchrist (NHGRI, NIH)  
Dr. Ramana Madupu (DOE)  
Dr. Lindsay Parish (USAID)  
Dr. Tim Kurt (FFAR)  
Dr. Jean-Charles Cavitte (European Commission)  
Dr. David Bailey (Genome Canada)
- 09:50 AM **Developing a Next Generation Blueprint**  
Dr. Caird Rexroad (USDA-ARS) 
- 10:00 AM **Livestock High-Throughput Phenotyping and Big Data Analytics**  
Dr. James Reecy (Iowa State University) 

**Acknowledgements**  
This workshop is supported by AFRI grant 2017-67015-26907 project accession 1013525 from the USDA National Institute of Food and Agriculture, the ARS Office of National Programs and the National Agricultural Library

Animalgenome.org

G2P: : <https://www.animalgenome.org/share/meetings/Genome2Phenome>

HTP: <https://www.animalgenome.org/share/meetings/LivestockHTP>

- 10:40 AM **Livestock Industry Perspectives**
- American Horse Council
  - American Paint Horse Association
  - American Quarter Horse Association
  - Angus Genetics, Inc
  - Arabian Horse Association
  - Aviagen Group
  - Genesis
  - Hendrix Genetics
  - Joe Jurgielewicz and Son LTD
  - Select Sires
  - S'Klallam Tribe, Sequim, WA
  - Superior Farms
  - The Jockey Club
  - Transova
  - U.S. Trotting Association
  - Welsh Pony and Cob Society of America

11:30 AM **Discussion Session I: *Science to Practice***

*Breakout groups:*

- Precision Selection 1
- Precision Selection 2
- Precision Management Systems 1
- Precision Management Systems 2

12:00 PM *Working Lunch*

01:00 PM **Thoughts on Components of an Agricultural Data Ecosystem**  
Dr. Sean Davis (NIH)



01:40 PM **Long Reads and the Future of Vertebrate Genome Sequencing**  
Dr. Adam Phillippy (NIH)



02:20 PM **Discussion Session II: *Discovery Science***

*Breakout groups:*

- Genomic and Functional Biology
- Host Pathogen Interactions
- Phenotyping
- Microbiome and Metagenomics

04:30 PM **Panel Discussion – Federal and International Partners**

➤ Please introduce yourself and company.

➤ What it is that you wish you could do, but just cannot do today due to cost or lack of technology?

➤ What is/are the biggest current and 10-year challenge(s) to your industry that changing traits in your animals might be able to address?

➤ Are there opportunities between different segments of the industry? For example, something that does not fall within the wheelhouse of the breed association/company or the meat industry (expand to any topic one can think of), but would be very beneficial for both industries?

➤ Other insights?

## November 16, 2017 (Thursday)

08:30 AM *Registration Open*

09:00 AM **Writing Genomes**  
Dr. Jef Boeke (New York Medical Center)

video  
permission  
pending

09:40 AM **Using Networks to Understand the Genotype-Phenotype Connection**  
Dr. John Quackenbush (Harvard T.H. Chan School of Public Health)

video  
coming

10:20 AM **Discussion Session III: Infrastructure**

*Breakout groups:*

- Genomic Tools and Resources
- Education and Training
- Bioinformatics and Computational Biology
- Genome Modification
- Animal Populations / Germplasm Preservation

12:00 PM *Working Lunch*

**Presentation from the National Agricultural Library**  
Dr. Cynthia Parr (NAL, USDA)

video  
coming

01:00 PM **Writing Teams I** (See Pre-Workshop Draft)

*Breakout groups:*

- Genomic and Functional Biology
- Host-Pathogen Interactions
- Microbiome
- Genome Modification
- Bioinformatics and Computational Biology

01:00 PM **Writing Teams II** (See Pre-Workshop Draft)

*Breakout groups:*

- Phenotyping
- Genomic Tools and Resources
- Education and Training
- Precision Selection
- Precision Management Systems
- Animal Populations / Germplasm Preservation

04:00 PM **Discussion Sessions I, II, and III Report Out**

▶ Video

**Writing Teams Report Out**

▶ Video

# Next Steps:

Finalize Post-Workshop Draft – January/February 2018

*Online Comment Forum – March – April 2018*

*Broader audience, inclusive of International and Industry representation*

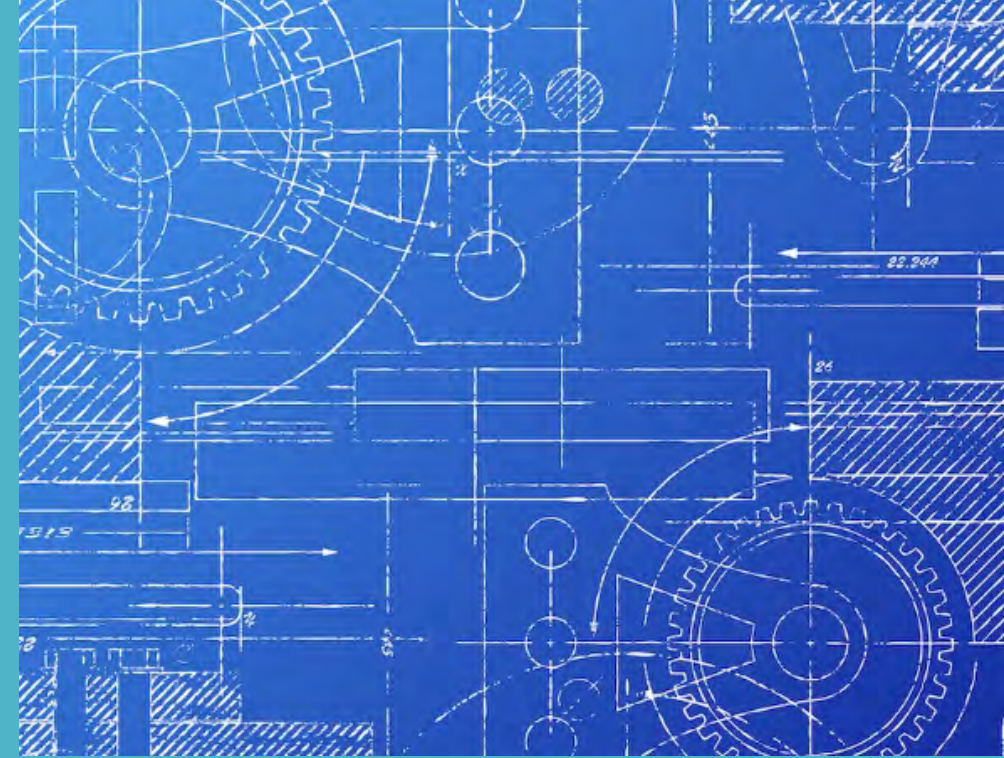
Post Online Revision

Outreach Document

Publish Summer/Fall 2018

# Topic Format

- ✓ Active Title
- ✓ Vision Statement
- ✓ Current State of the Art
- ✓ Future Goals
- ✓ Resources Required (other than funding)
- ✓ Expected Impacts and Deliverables (in terms of social, economic or environmental value)
- ✓ Required Partnerships (within and outside the animal genome research community)



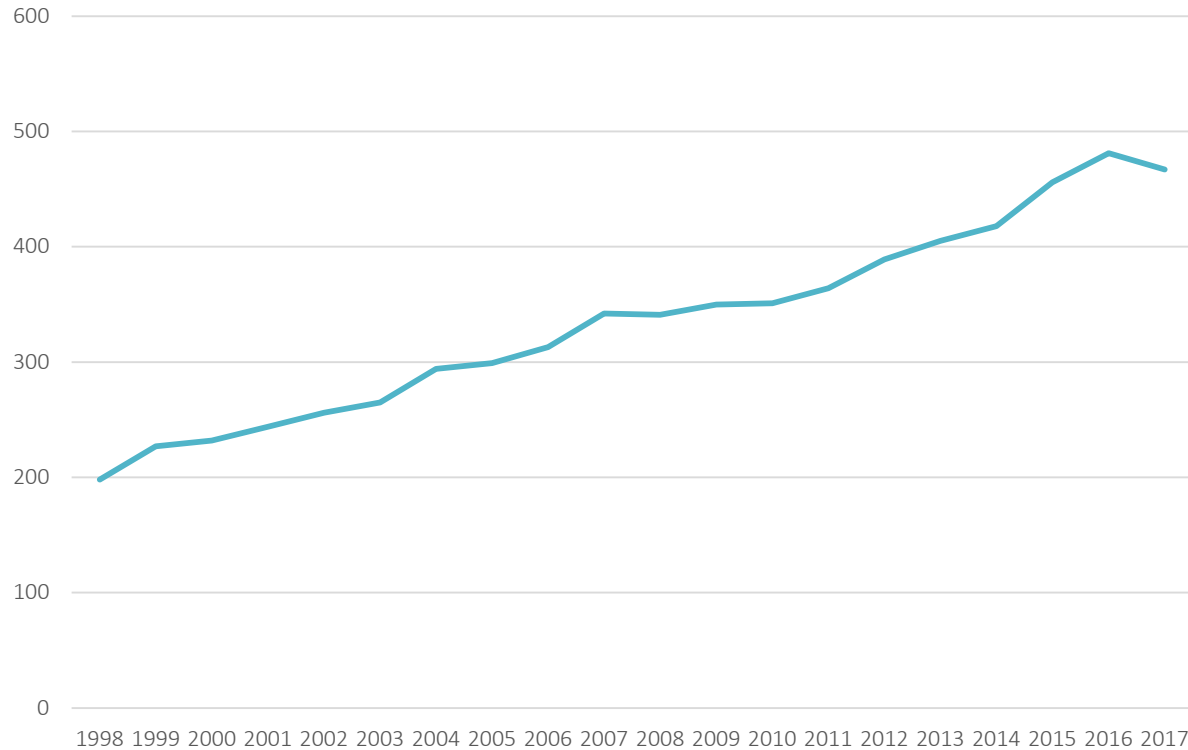


# Animal Genomics USDA Investments 2008 - 2017

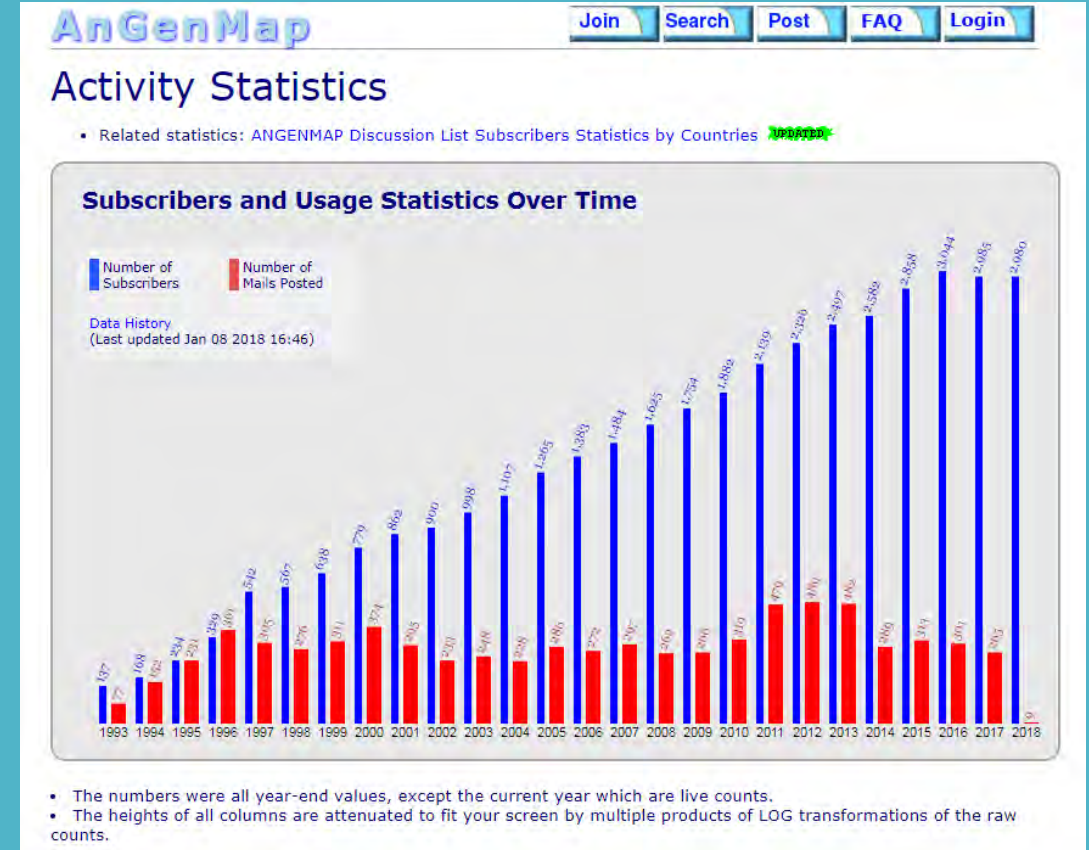
ARS	\$316,049,808
NIFA Formula	\$64,794,000
<u>NIFA Competitive</u>	<u>\$124,328,461</u>
Total	\$505,172,269

# Animal Genomics Community - AnGenMap

US Animal Genomics Community – AnGenMap



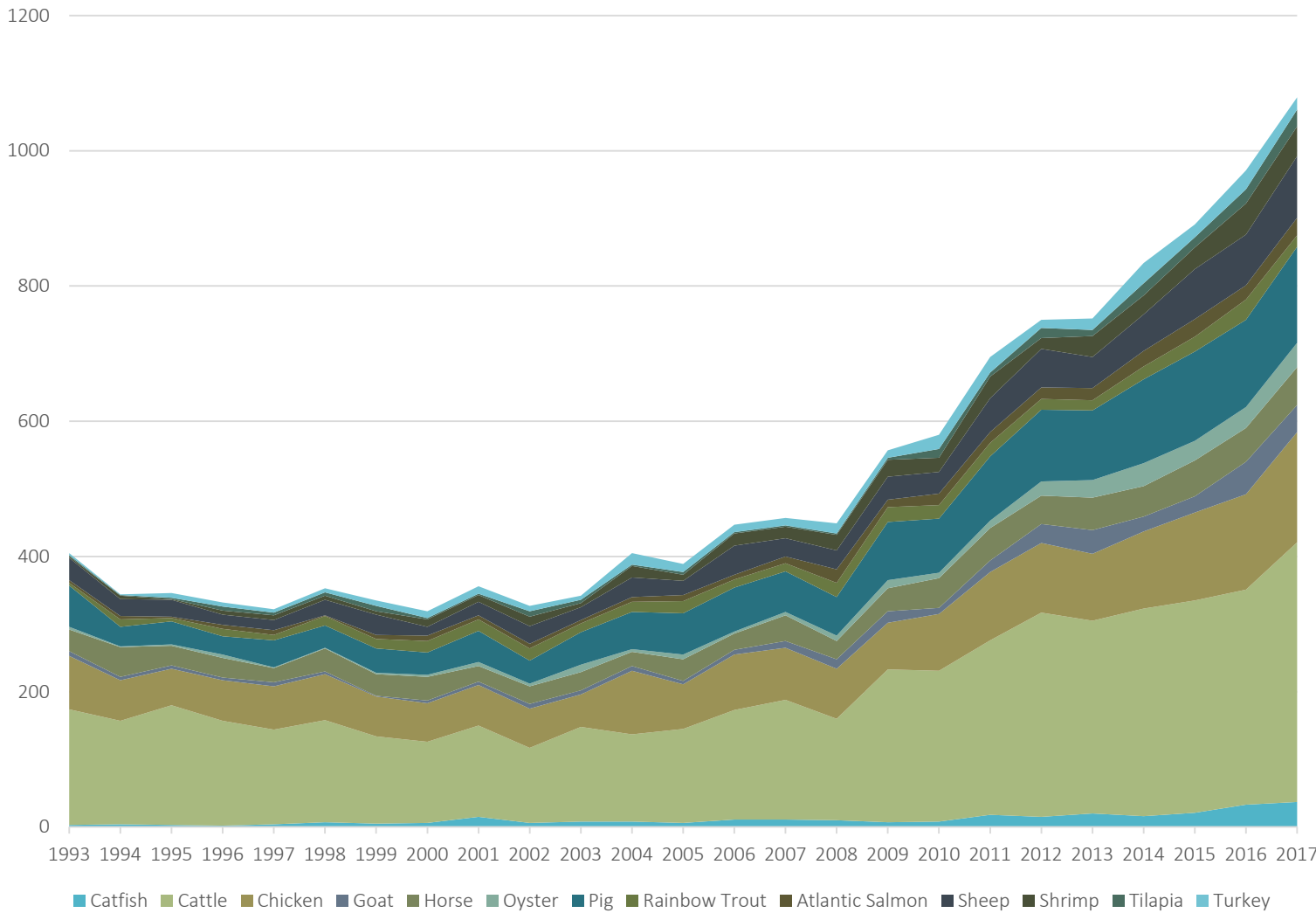
- 465 from the US, ~30% of subscribers from known country



- 2017 - 65 Countries and 2945 Subscribers

# Return on Investment

Animal Genome Publications by Year

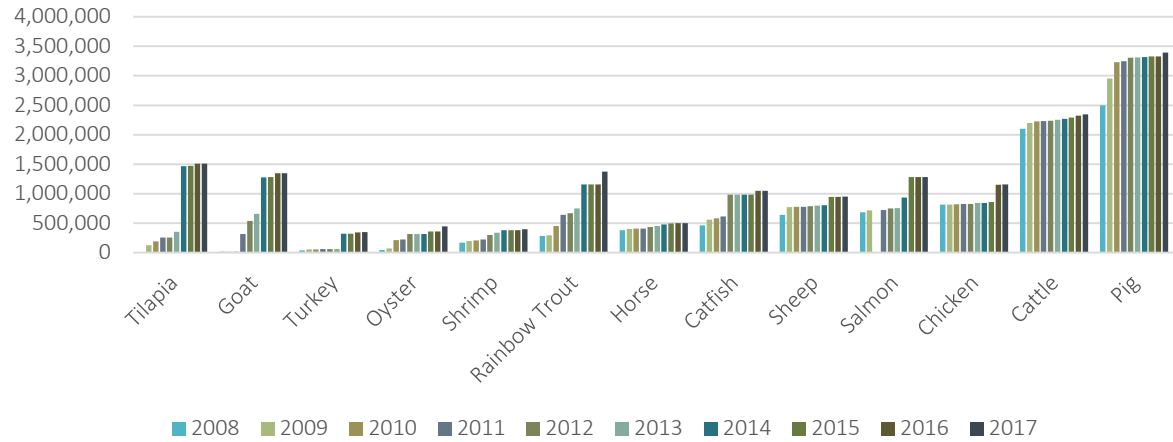


- 13 species included in 2008 Blueprint
- Journals indexed in Pubmed

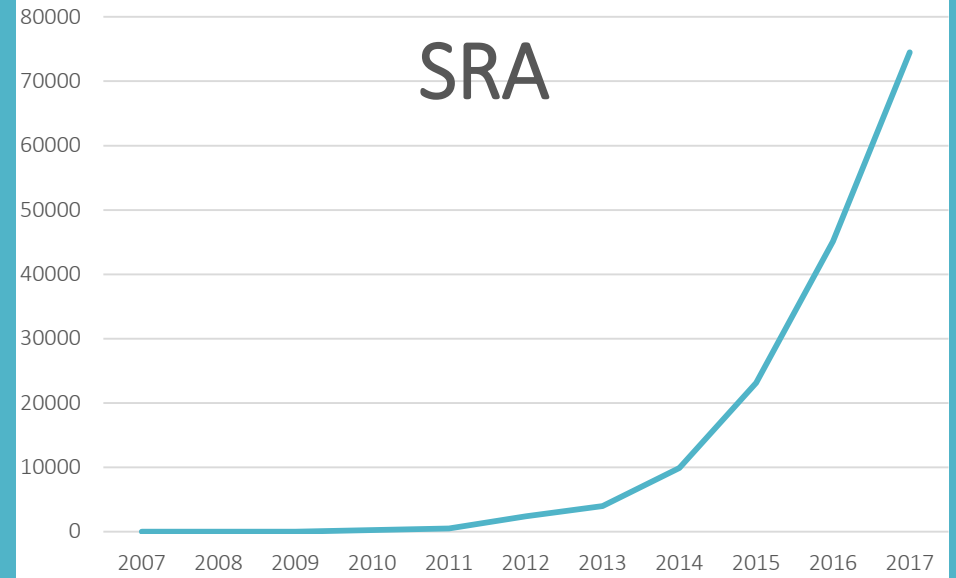
Timeframe	# Pubs
2008-2017	7558
1998-2007	3730
Total since 1993	13037
Total since 1949	17203

(\*genom\* OR sequenc\* OR GWAS OR SNP OR polymorphi\* OR transcript\* OR \*DNA\* OR \*RNA\*) AND (species OR common name)

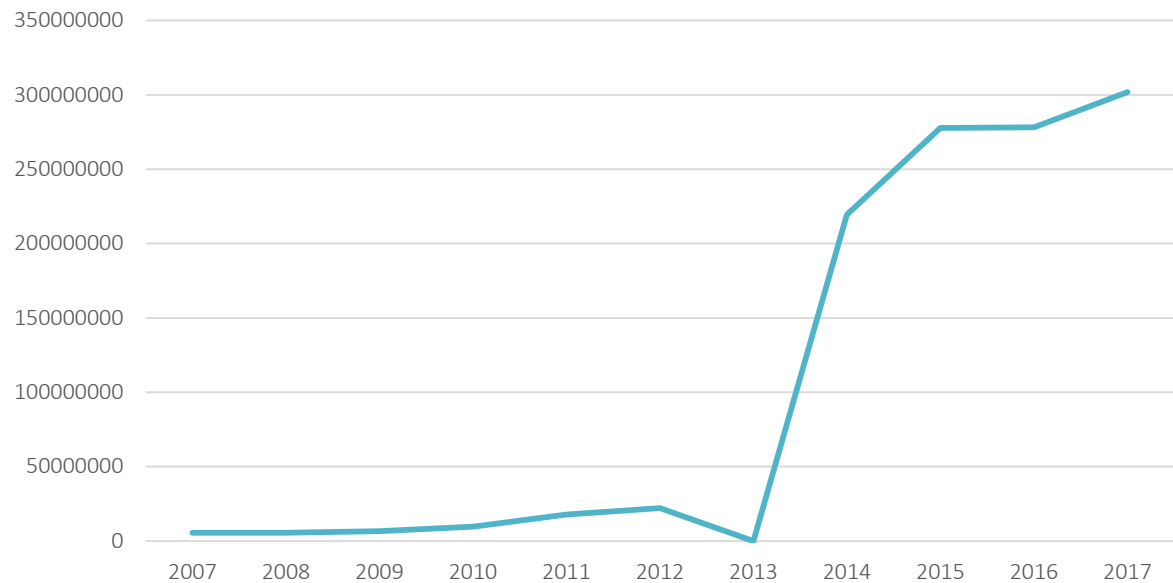
# Nucleotide Sequences



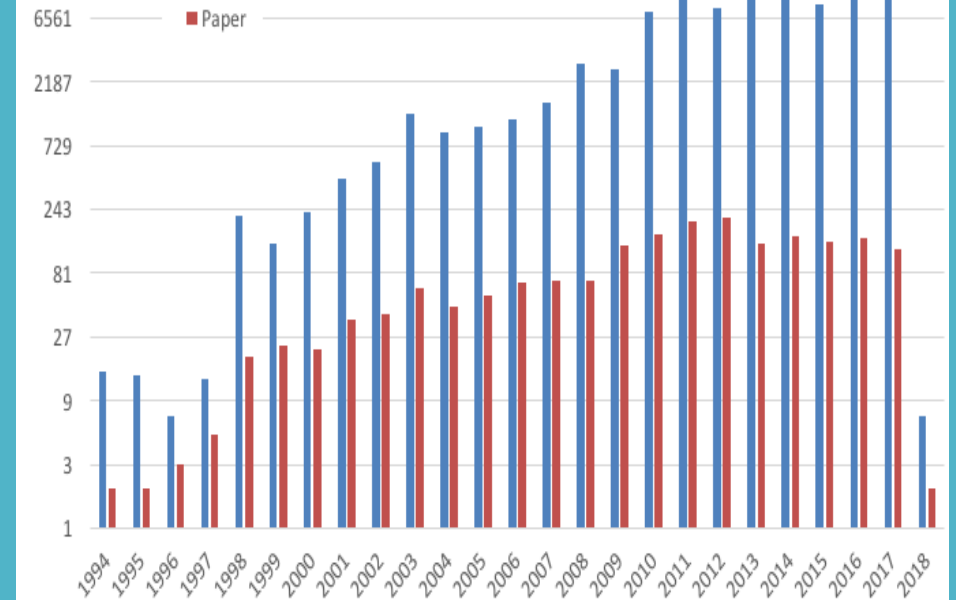
# SRA



# dbSNP



# QTLdb



# Sequenced, Re-sequenced and HT Genotyping Platform (+)

- ✓ Atlantic salmon + ✓ Rainbow trout +
- ✓ Catfish + ✓ Sheep +
- ✓ Cattle + ✓ Shrimp +
- ✓ Chicken + ✓ Tilapia +
- ✓ Goat + ✓ Turkey +
- ✓ Horse +
- ✓ Oyster +
- ✓ Pig +


NCBI Resources How To

Genome Genome Limits Advanced

**Sus scrofa (pig)**  
**Representative genome: Sus scrofa (assembly Sscrofa11.1)**  
 Download sequences in FASTA format for **genome, transcript, protein**  
 Download genome annotation in GFF, GenBank or tabular format  
 BLAST against Sus scrofa genome  
**All 16 genomes for species:**  
 Browse the list  
 Download sequence and annotation from RefSeq or GenBank

Display Settings: Overview Send to: ID: 84

**Organism Overview** : Genome Assembly and Annotation report [16] : Organelle Annotation Report [4]

 **Sus scrofa (pig)**  
pig

Lineage: Eukaryota[2659]; Metazoa[874]; Chordata[375]; Craniata[367]; Vertebrata[367]; Euteleostomi[361]; Mammalia[154]; Eutheria[149]; Laurasiatheria[72]; Cetartiodactyla[32]; Suina[1]; Suidae[1]; Sus[1]; Sus scrofa[1]

The pig (*Sus scrofa*) is a member of the artiodactyls, or cloven-hoofed mammals, which are an evolutionary clade distinct from the primates and rodents. Pigs exist in both feral and domesticated populations that have distinct phenotypes and karyotypes. The haploid genome of the domesticated pig is estimated to be 2800 Mb. The diploid genome is [More...](#)

**Summary**


**Sequence data:** genome assemblies: 16; sequence reads: 23 (See Genome Assembly and Annotation report)  
**Statistics:** median total length (Mb): 2457.91  
 median protein count: 63577  
 median GC%: 41.5  
 NCBI Annotation Release: 105

**Representative** (genome information for reference and representative genomes)

**Reference genome:**  
 •  **Sus scrofa Sscrofa11.1**  
 Submitter: The Swine Genome Sequencing Consortium (SGSC)

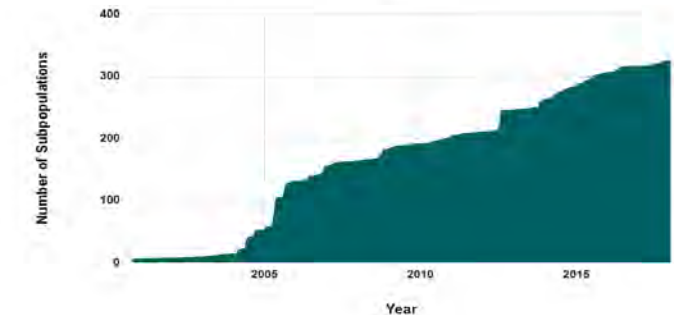
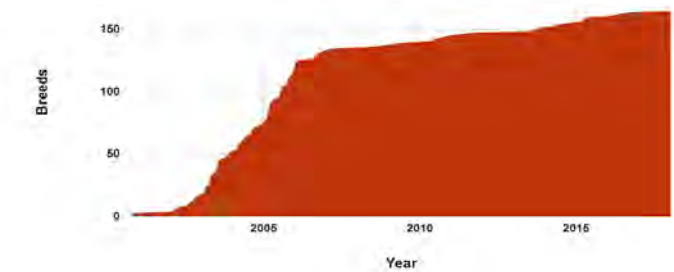
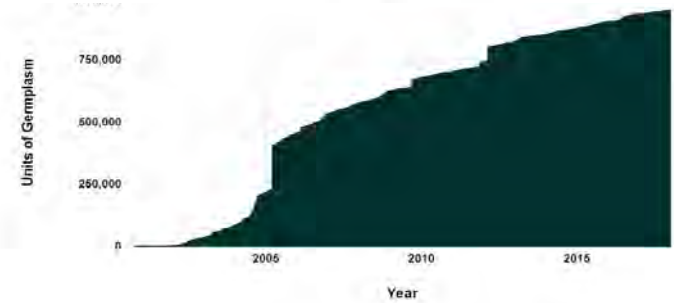
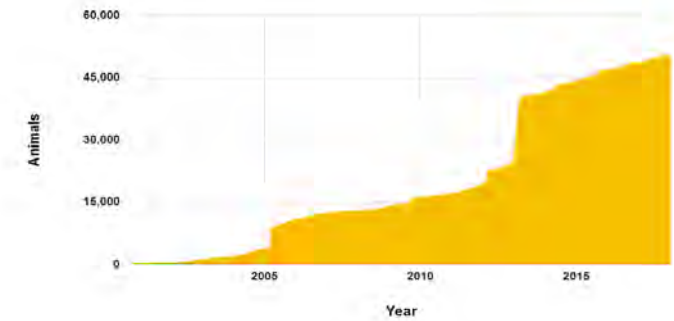
Loc	Type	Name	RefSeq	INSDC	Size (Mb)	GC%	Protein	rRNA	tRNA	Other RNA	Gene	Pseudogene
	master WGS		-	AEMK00000000.2	2,454.9	41.9	-	-	-	-	-	-
Chr	1	NC_010443.5		CM000812.5	274.33	40.2	5,392	-	21	1,255	2,423	260
Chr	2	NC_010444.4		CM000813.5	151.94	42.5	5,641	-	29	988	2,683	257
Chr	3	NC_010445.4		CM000814.5	132.85	44.2	4,054	-	36	941	1,805	109
Chr	4	NC_010446.5		CM000815.5	130.91	41.6	3,628	-	70	868	1,650	104
Chr	5	NC_010447.5		CM000816.5	104.53	42.2	3,219	-	12	653	1,458	103
Chr	6	NC_010448.4		CM000817.5	170.84	44.7	6,262	-	16	1,282	2,724	167
Chr	7	NC_010449.5		CM000818.5	121.84	43.1	3,720	-	143	889	1,978	133
Chr	8	NC_010460.4		CM000819.5	138.97	39.5	2,216	-	2	644	1,096	109
Chr	9	NC_010461.4		CM000820.5	139.51	41.2	3,659	-	8	893	1,715	169
Chr	10	NC_010462.4		CM000821.5	69.36	42.7	1,455	-	5	428	664	54
Chr	11	NC_010463.5		CM000822.5	79.17	40.6	1,156	-	5	406	559	43
Chr	12	NC_010464.4		CM000823.5	61.6	47.7	3,151	-	44	708	1,468	58
Chr	13	NC_010465.5		CM000824.5	208.34	39.9	4,724	-	4	918	1,841	200
Chr	14	NC_010466.5		CM000825.5	141.76	43.2	4,088	-	11	811	1,667	132
Chr	15	NC_010467.5		CM000826.5	140.41	39.9	2,727	-	7	561	1,106	115
Chr	16	NC_010468.4		CM000827.5	79.94	40.3	940	-	5	390	588	50
Chr	17	NC_010469.5		CM000828.5	63.49	44.7	1,823	-	5	459	821	46
Chr	18	NC_010460.4		CM000829.5	55.98	43.1	1,368	-	17	400	659	41
Chr	X	NC_010461.5		CM000830.5	125.94	40.4	2,482	-	8	523	1,172	170
Chr	Y	NC_010462.3		LT834572.1	43.55	47.5	118	-	-	57	147	45
Chr	MT	NC_000845.1		AF034253.1	0.02	39.5	13	2	22	-	13	-
Un	-				66.63	43.3	1,741	2	62	331	1,936	596

**Chromosomes**



# Germplasm Preservation and Characterization – US NAGP

Common Name	Number of Animals	Units of Germplasm	Phenotypic Data	Molecular Data
Aquatic Freshwater Fish	6813	95664		
Aquatic Invertebrates	218	7485		
Aquatic Marine Fish	15	823		
Beef Cattle	9773	241410	Yes	Yes
Bison	75	1631	Yes	
Chicken	1936	14752	Yes	
Dairy Cattle	7187	253113	Yes	Yes
Elk	4	340		
Goat	490	10579	Yes	Yes
Honey Bee	3	21		
Horse	20	150	Yes	
Nematode	19169	19169		
Pig	1537	217703	Yes	Yes
Screwworm	10	19350		
Sheep	2832	65093	Yes	Yes
Turkey	242	624	Yes	
Yak	4	111	Yes	
<b>TOTAL: 17</b>	<b>50328</b>	<b>948018</b>		



# Public Private Partnership - Dairy Genomics Example

ARS \$70,000,000

NIFA \$30,864,000

American Jersey Cattle Association

Holstein Association USA

National Association of Animal Breeders

Illumina

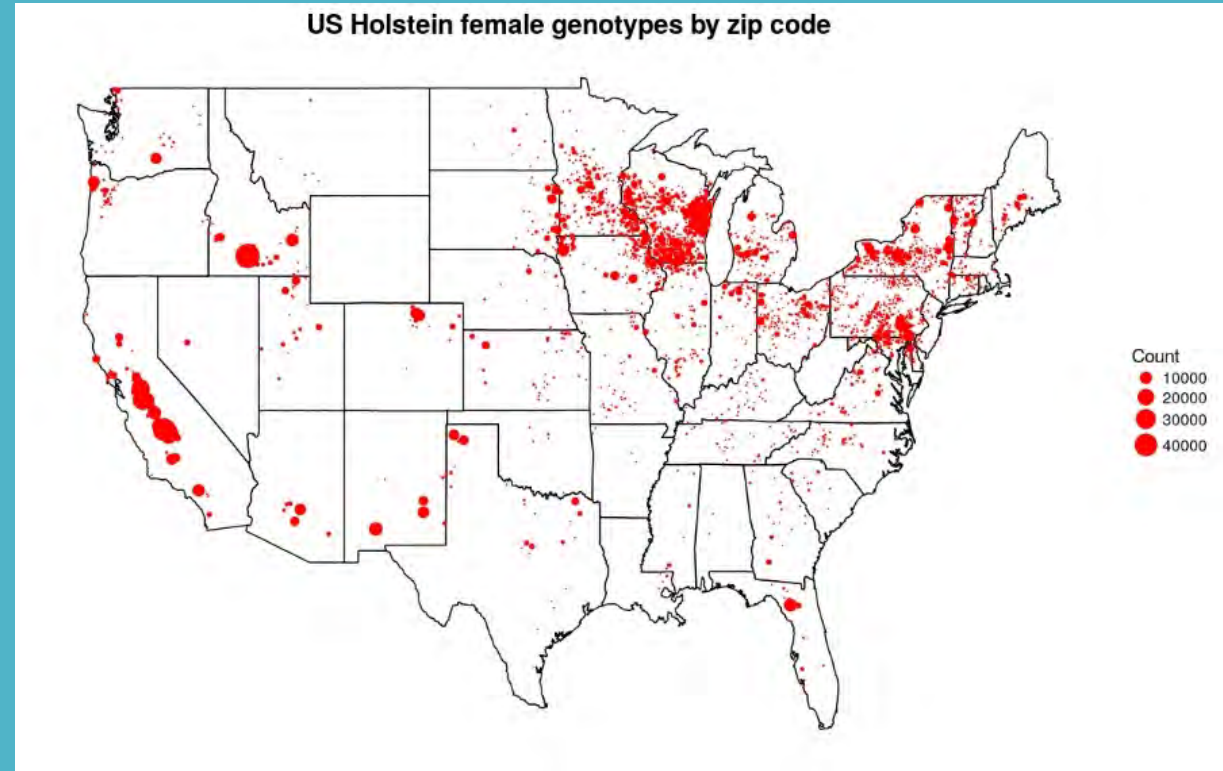
Council on Dairy Cattle Breeding



CDCB Connection

January 2018

CDCB and USDA Extend Data, R&D Agreement

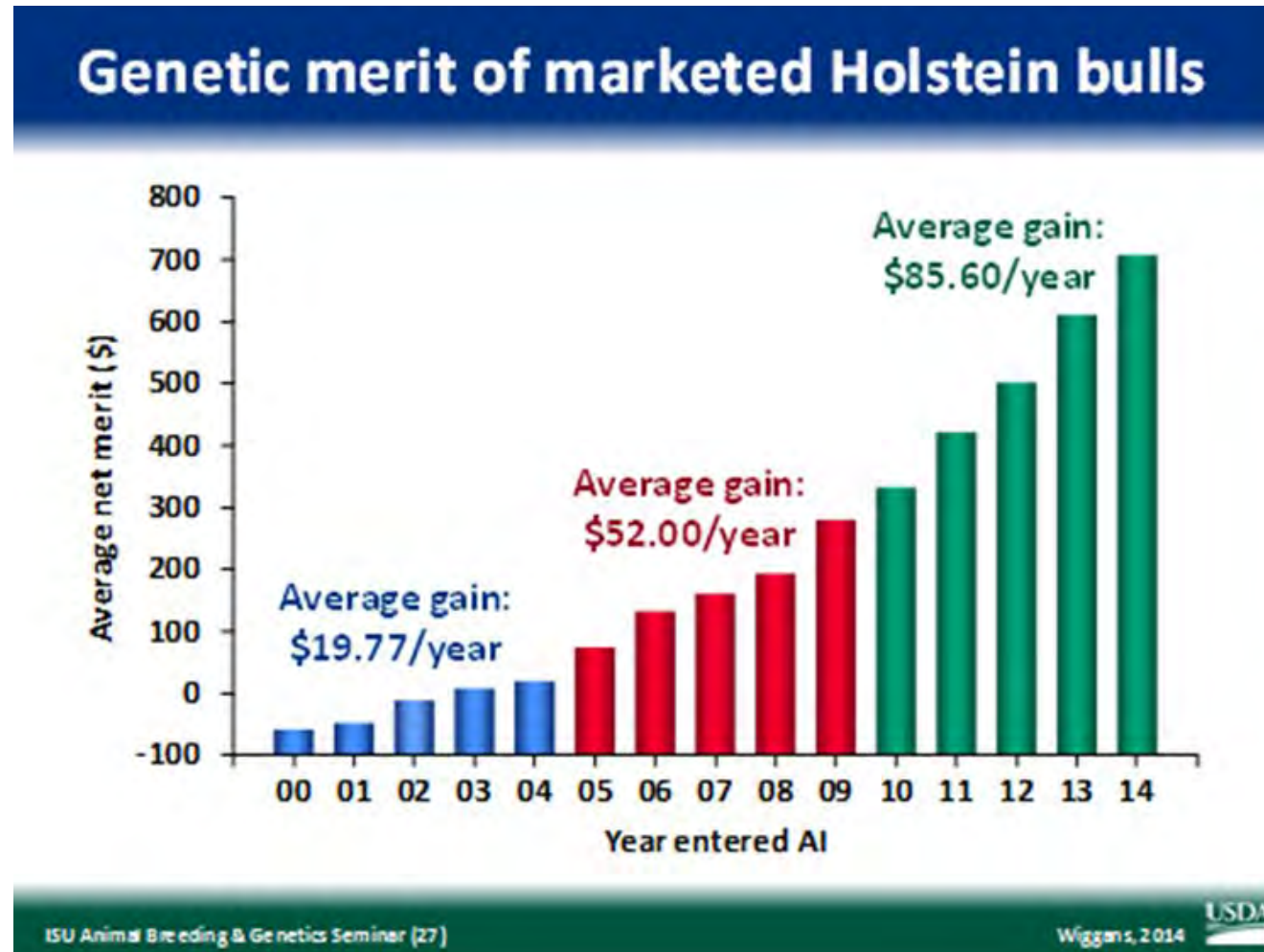


Troy Rowan, George Wiggans

1,136,252 animals with Known Zip Code



# Progress in the dairy industry



Started to use 50K SNP chip in April 2008, most of the gains are from including high value, low heritable traits into the Selection Index.

# High-Throughput Phenotyping and Big Data Analytics in Livestock Workshop November 13-14, 2017



This workshop is supported by AFRI grant 2017-67015-26907 project accession 1013525:  
USDA NIFA, the ARS Office of National Programs and the National Agricultural Library.

# Participants

- ▶ 96 individuals registered
  - ▶ University - faculty, post-doc, students
  - ▶ Federal Agency - USDA, NSF
  - ▶ Industry - Swine, dairy
  - ▶ International
    - ▶ Canada
    - ▶ Norway
- ▶ Numerous disciplines/industries

# Why were we there?

- ▶ **Discuss current state of the art**
  - ▶ **High throughput phenotyping**
  - ▶ **Data analytics**
- ▶ **Species agnostic**
- ▶ **Discipline agnostic**

# Why were we there?

- ▶ **Identify opportunities/knowledge gaps**
- ▶ **Articulate a vision for the future**
- ▶ **Publish marker paper**

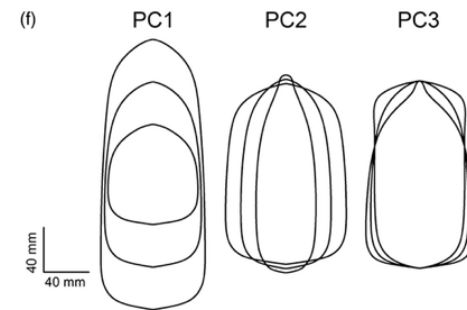
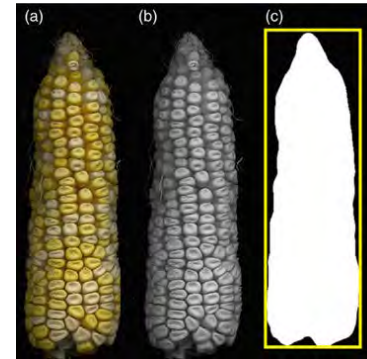
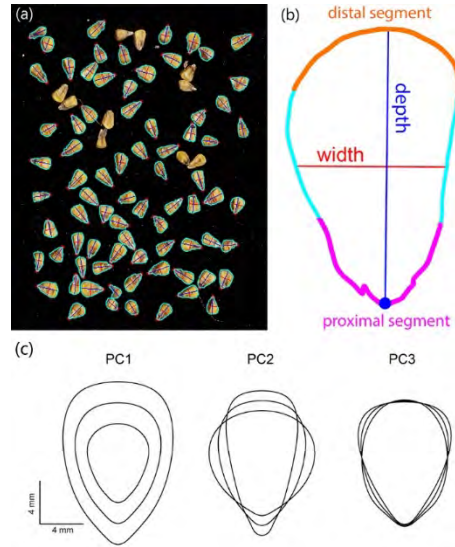
# Agenda

- ▶ Eight invited speakers
  - ▶ Plant and animal
  - ▶ Technology, application, data analysis, data visualization
- ▶ Six Lighting talks
- ▶ Breakout sessions
  - ▶ Opportunities
  - ▶ Priorities
- ▶ Day and a half meeting

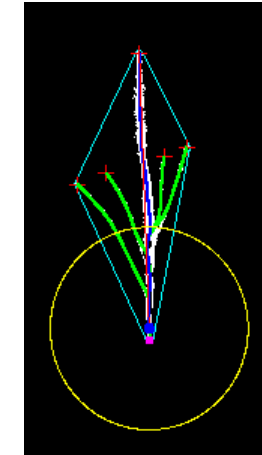
# What A Ruler Cannot Measure:



Joe Gage  
Univ of WI



*Miller et al 2016*

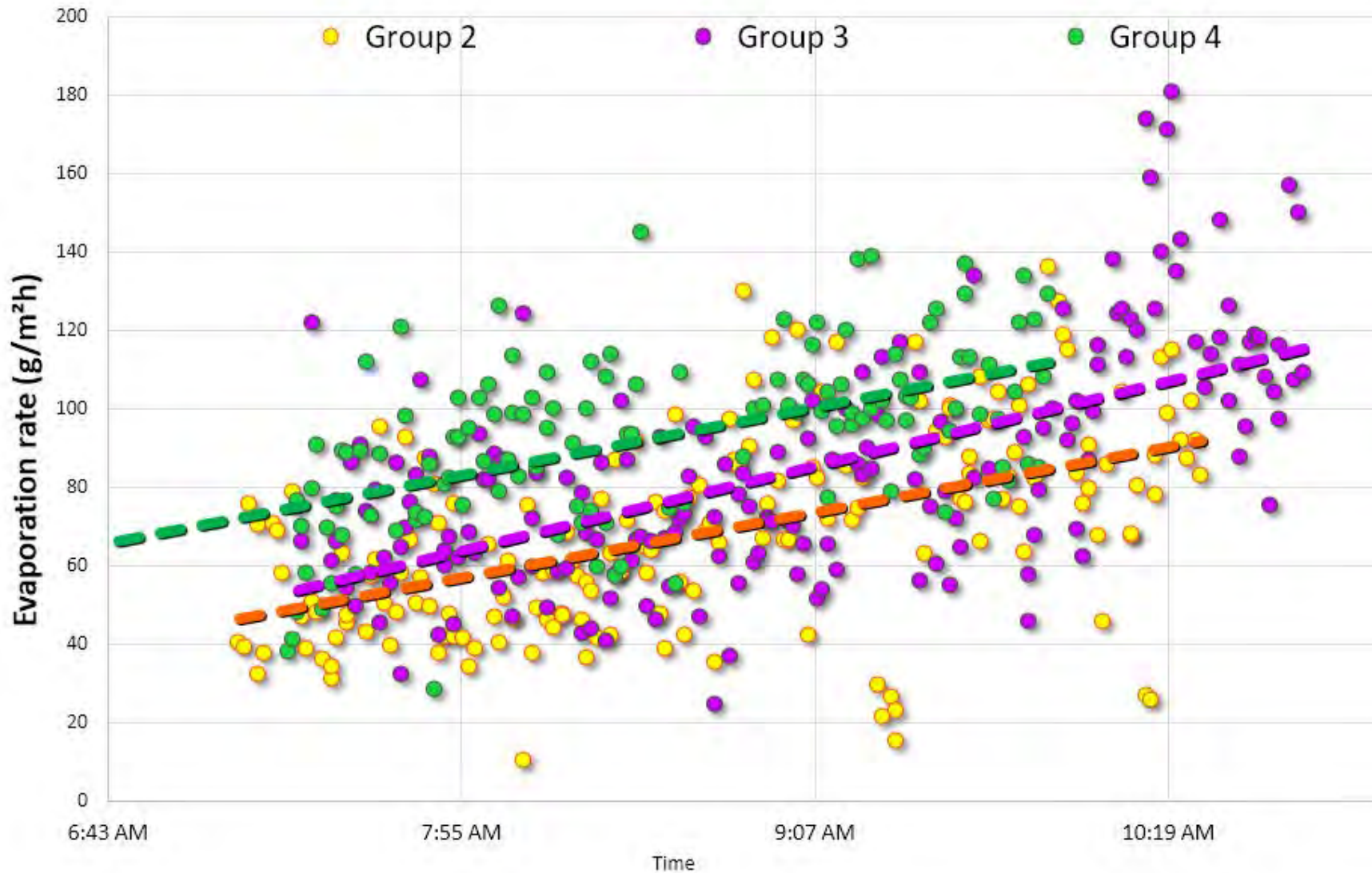


~27,000  
tassels  
evaluated  
in 3 years

- Green lines = branches
- Blue = main spike
- Cyan = bounding box
- Yellow circle = branch number
- Red line = tortuosity/curvature

*Gage et al 2016*

# Sweating rate vs Chute time by group (day)

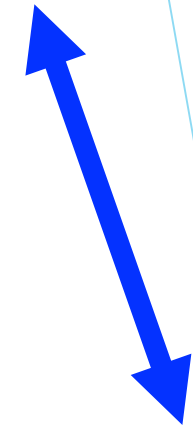
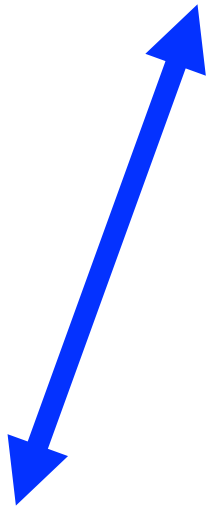
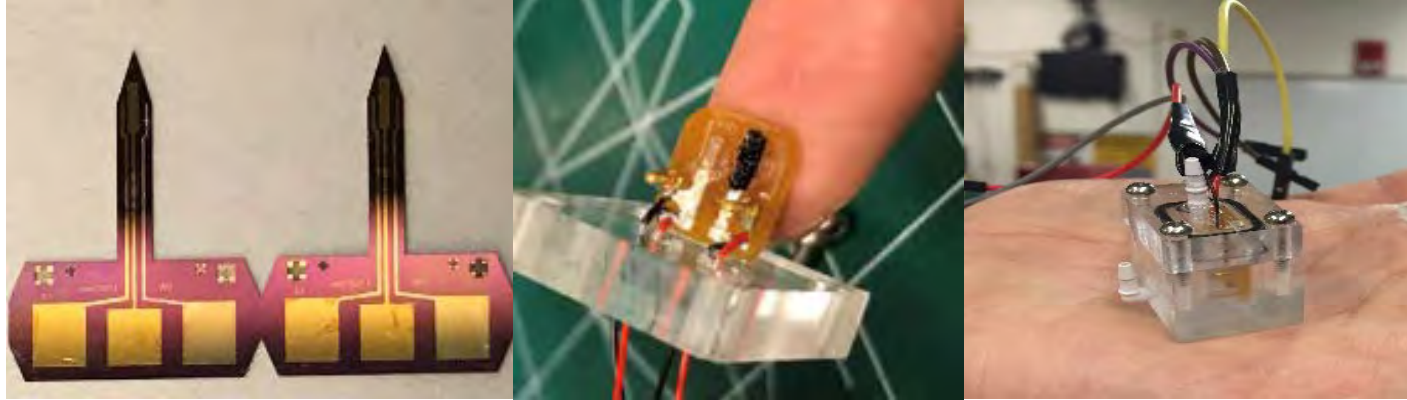


Chute score & exist score = significant

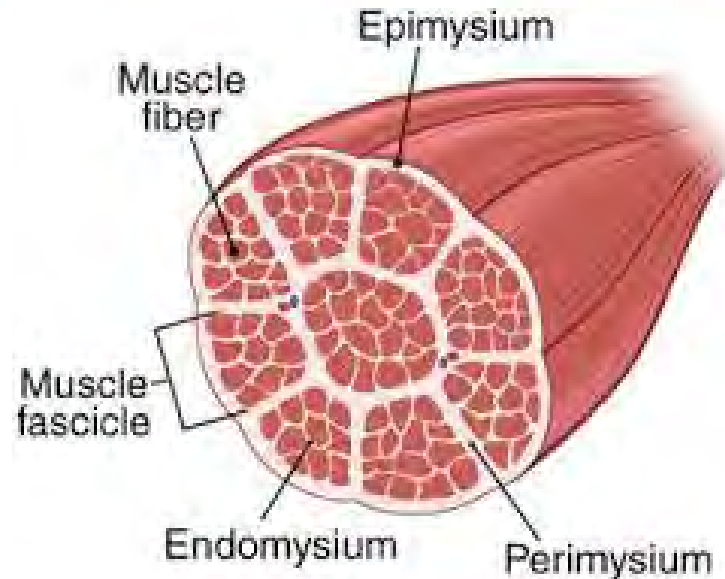
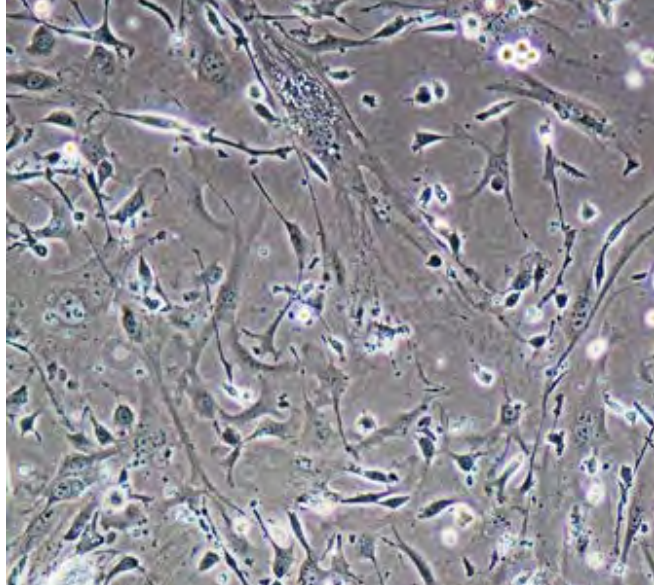


# Wearable leaf moisture sensors





# Experiment to Systems Level



# Thank You

- ▶ National Agricultural Library
- ▶ USDA-ARS
  - ▶ Caird Rexroad III
  - ▶ Janice Boarman
  - ▶ Loren Coleman
  - ▶ Kimberlee Watson
- ▶ USDA-NIFA
  - ▶ Funding
  - ▶ Lakshmi Matukumalli

# Thank you

## ▶ **Organizing committee**

▶ **Guilherme Rosa**

▶ **James Koltes**

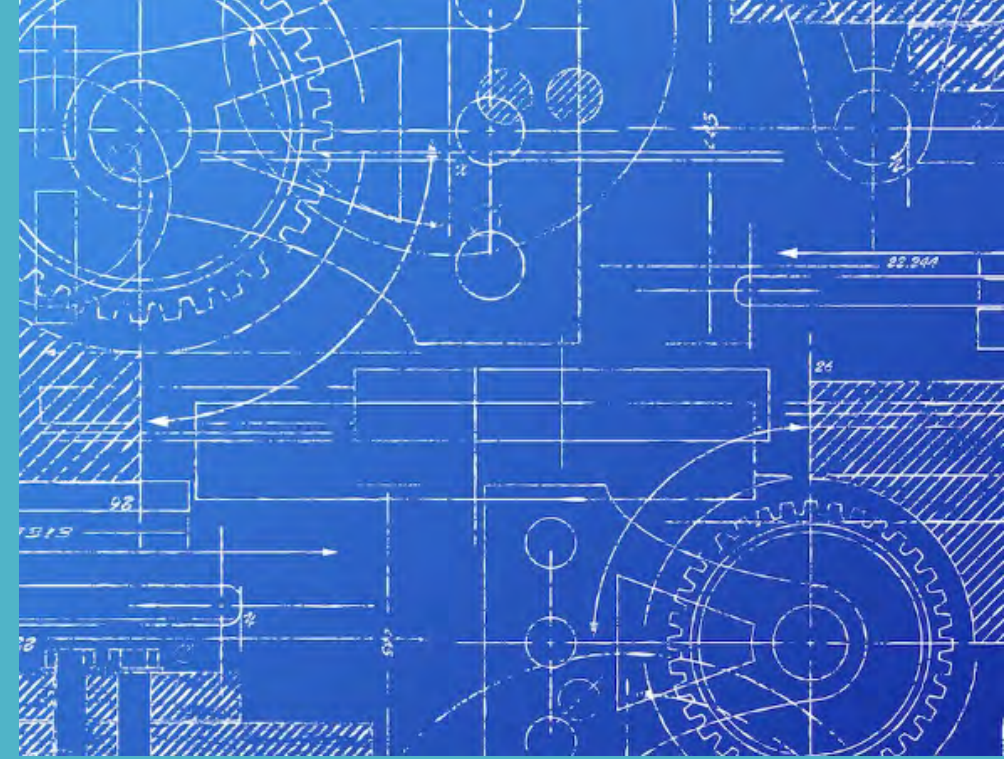
▶ **Nick Serao**

▶ **John Cole**

▶ **Raluca Mateescu**

▶ **Caird Rexroad III**

# Genome to Phenome



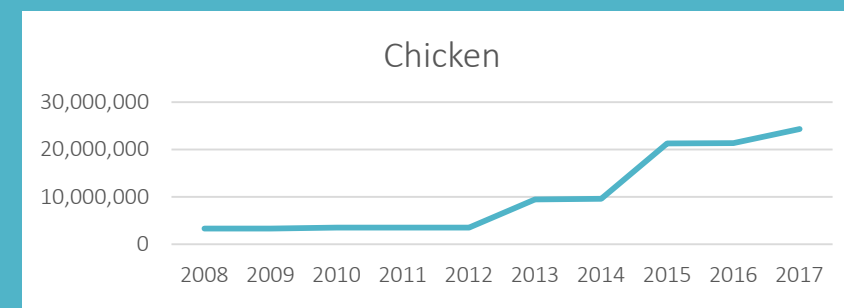
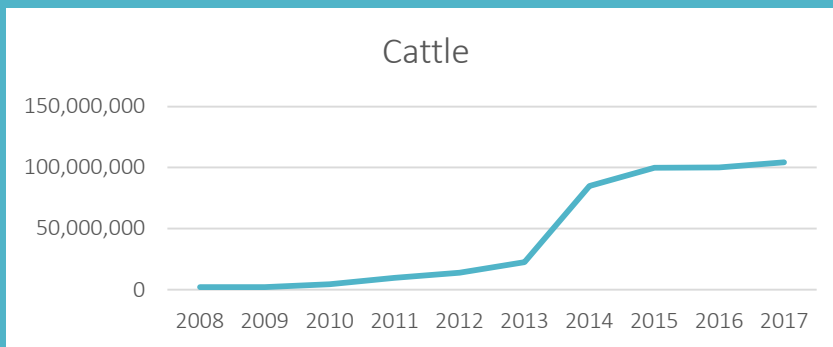
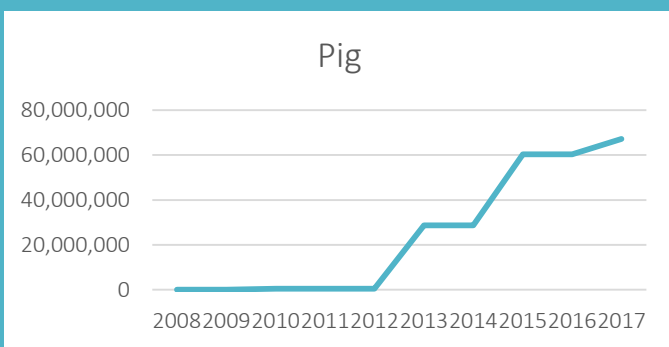
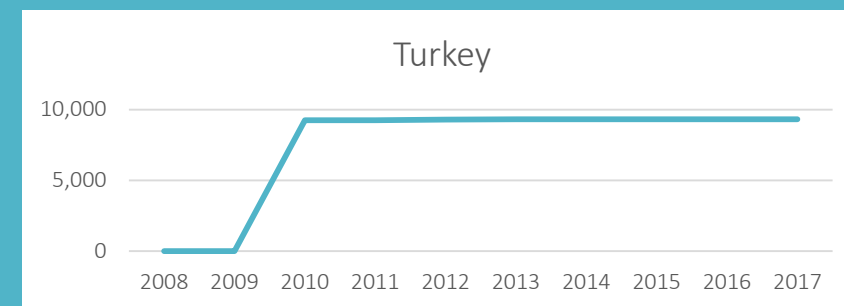
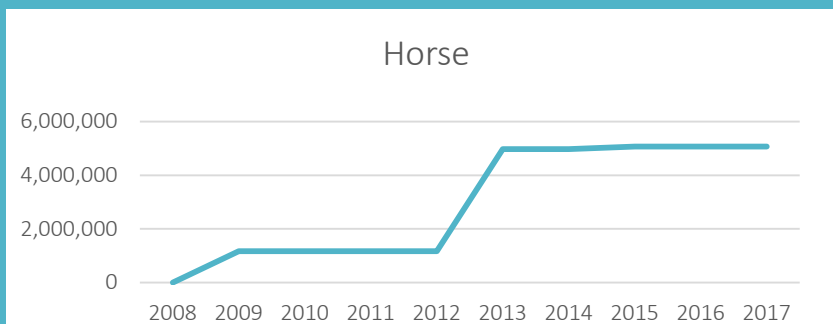
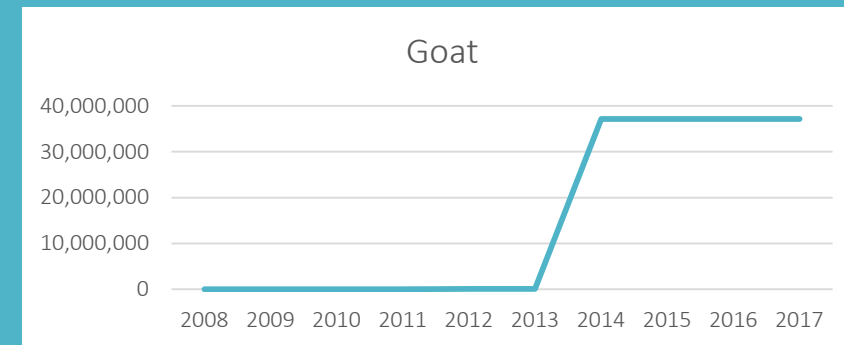
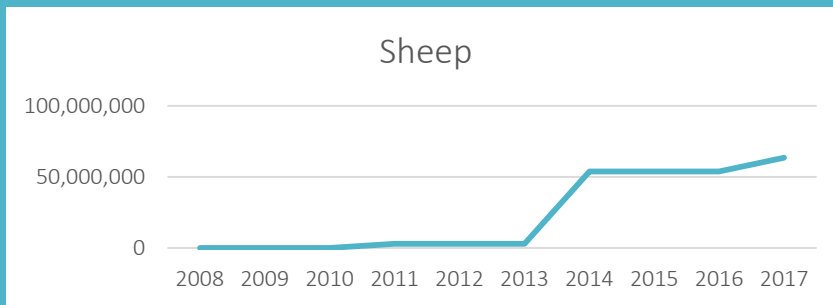
A USDA Blueprint for Animal Production  
2018 - 2027

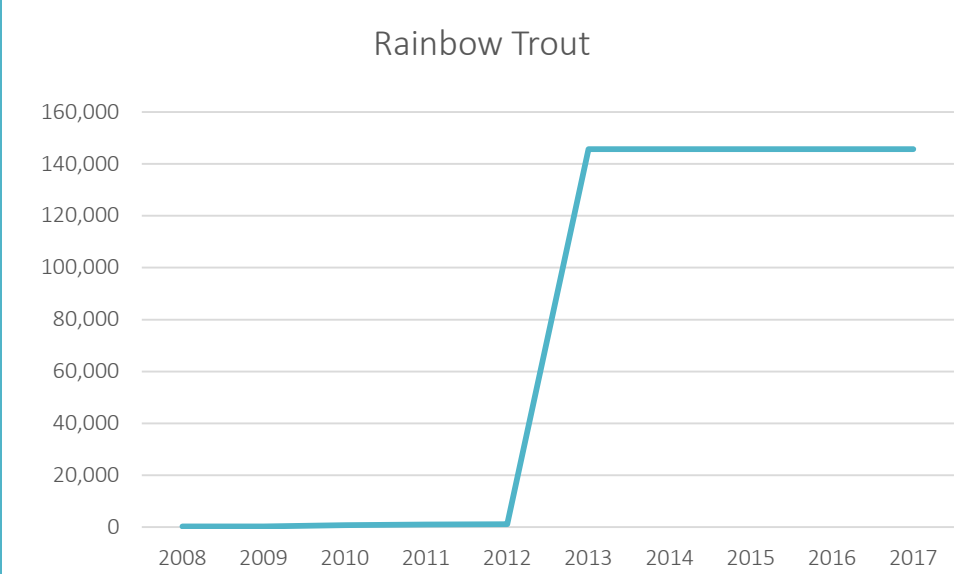
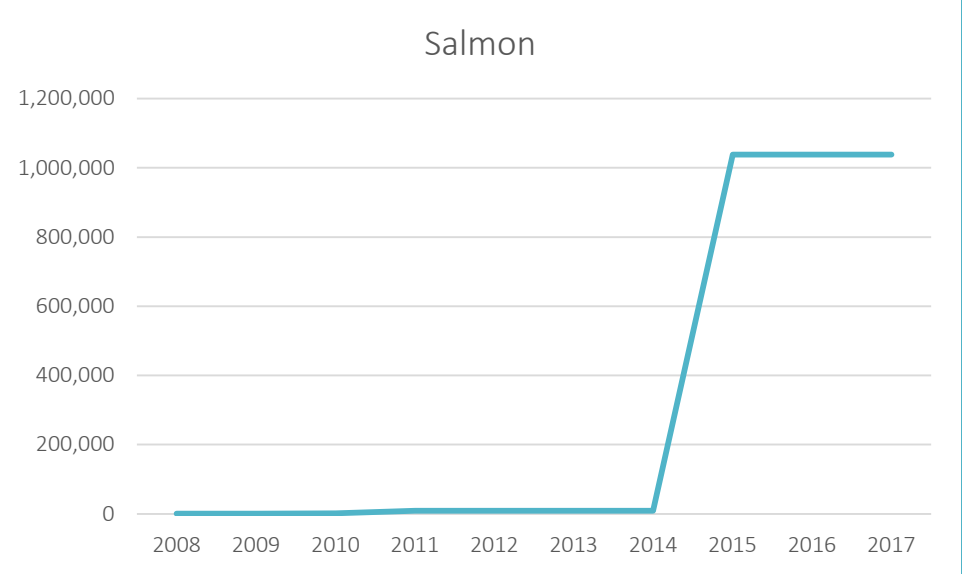
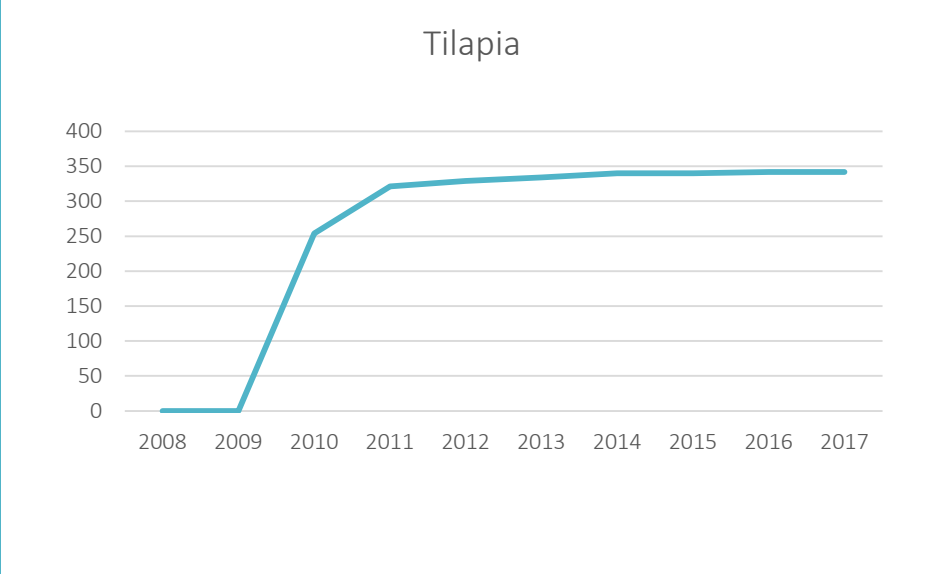


**IOWA STATE  
UNIVERSITY**  
Department of Animal Science

This effort is supported by AFRI grant 2017-67015-26907 project accession 1013525 from the USDA National Institute of Food and Agriculture, the ARS Office of National Programs and the National Agricultural Library.

# dbSNP Submissions 2008 - 2017







# QTLdb animalgenome.org

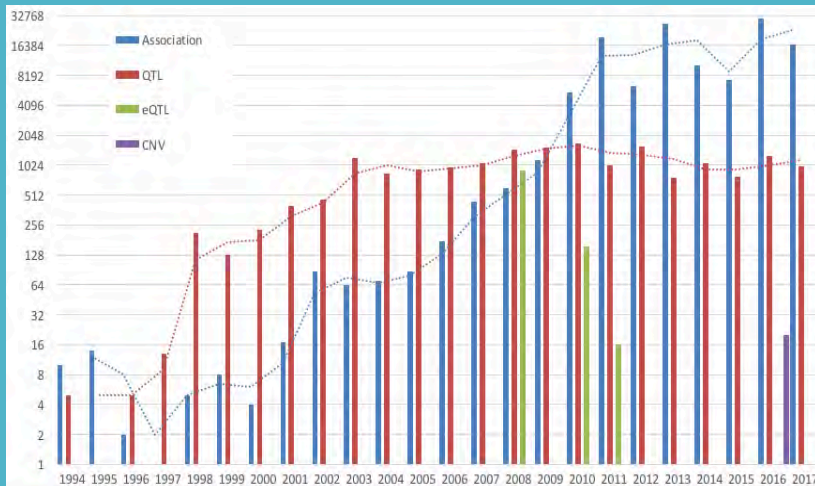


Table 2. Number of different data types curated into the QTLdb by years.

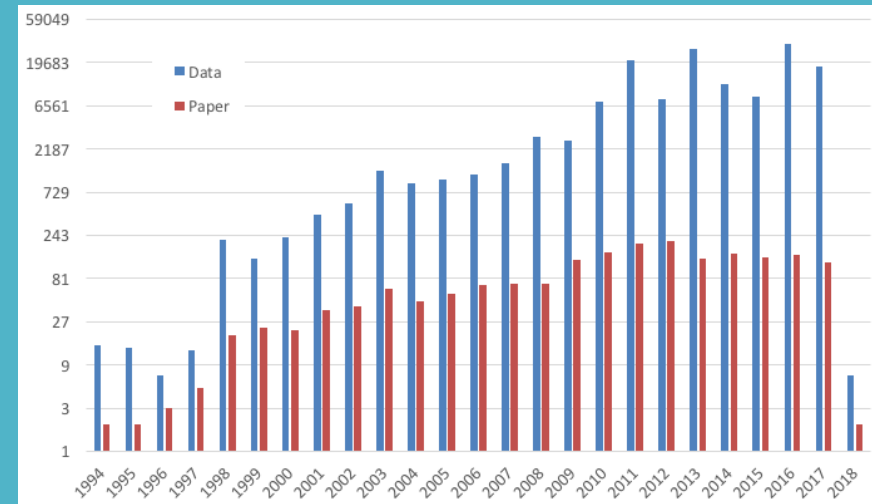


Table 1. Number of QTL/association data published/curated into the QTLdb by years.

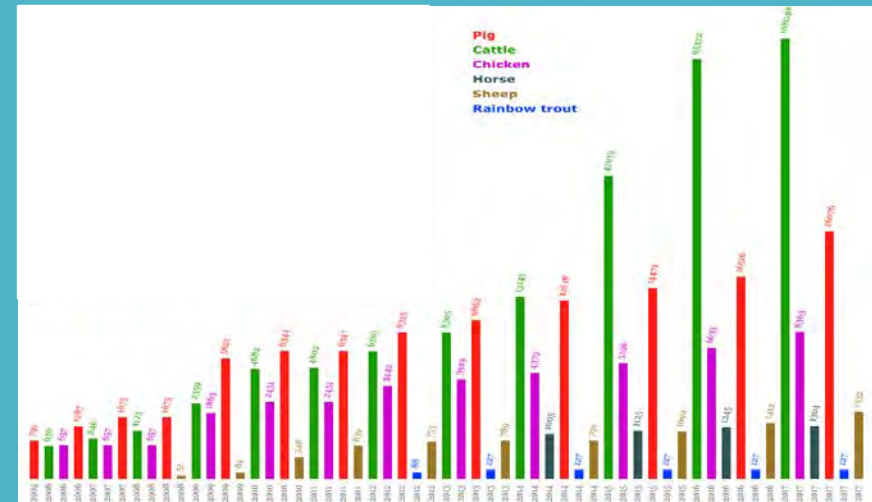


Table 3. Number of curated data increase by species and years.

Table 4. Number of genomes supported by QTLdb

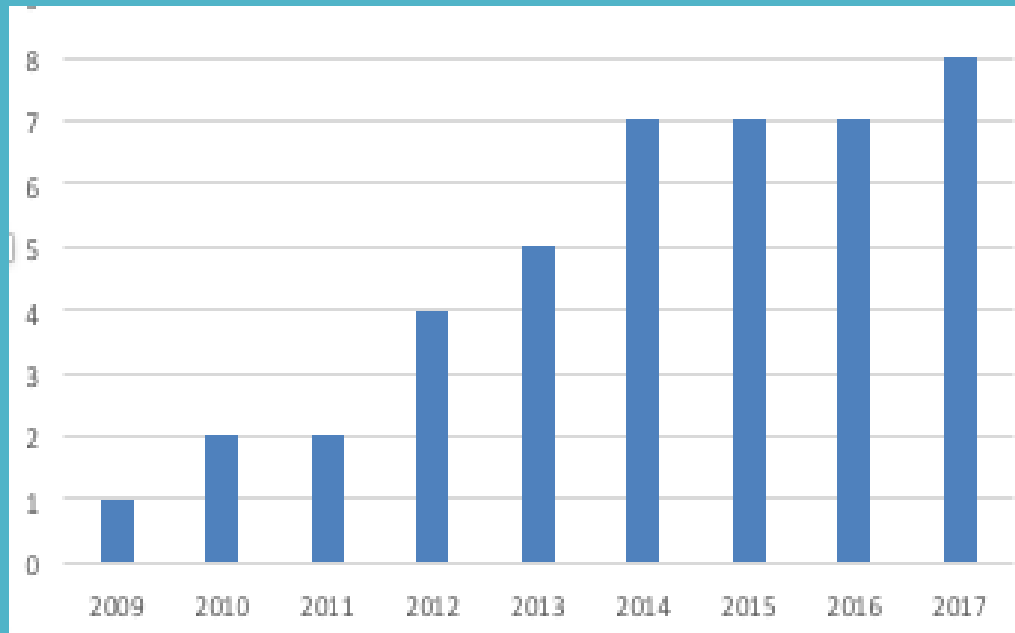
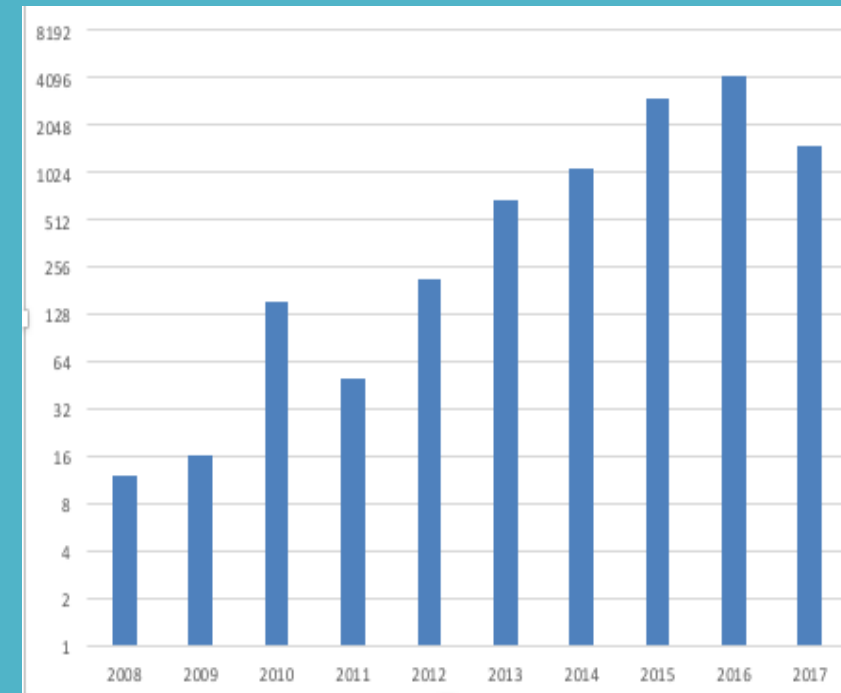


Table 5. Number of NCBI SRA data increase in livestock species



# Writing Team Leaders

- Develop pre-workshop draft from outline
- Lead Workshop Discussion Groups
- Lead workshop revisions
- Continue to represent topics in post-workshop revisions

Hans Cheng

Noelle Cockett

Cathy Ernst

Janet Fulton

John Liu

Joan Lunney

Jim Reecy

Tim Smith

Jerry Taylor

Curt Van Tassell

Archie Clutter

Bhanu Telugu

Derek Bickhart

Harvey Blackburn

Mark Boggess

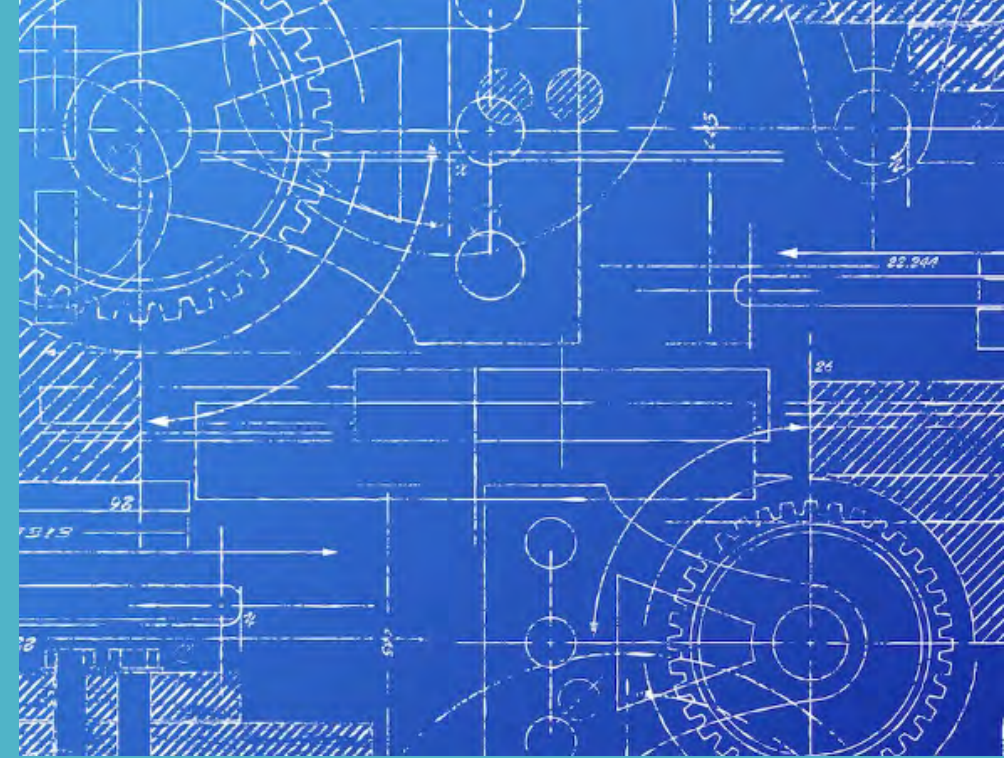
Holly Neibergs

Kevin Wells

Tad Sonstegard

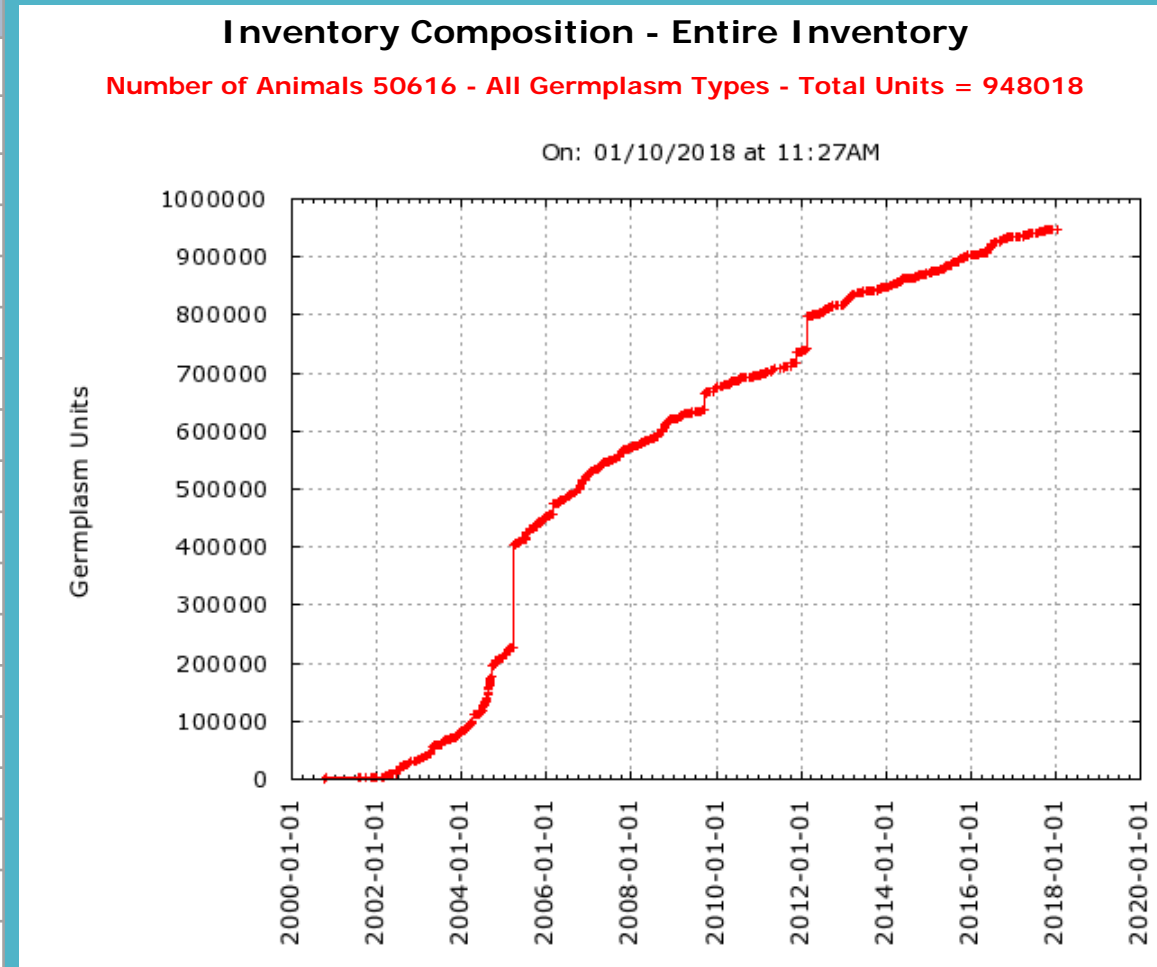
# Blueprint Process

- 2018 – 2027
- USDA National Programs
- Steering Committee
- Writing Teams
- Workshop
- PAG NRSP8 Session
- Online Platform for comments from broader community
  - ✓ Animal industries
  - ✓ International research community
- Finalize Summer 2018



# Germplasm Preservation and Characterization

Common Name	Number of Animals	Units of Germplasm	Phenotypic Data	Molecular Data
Aquatic Freshwater Fish	6813	95664		
Aquatic Invertebrates	218	7485		
Aquatic Marine Fish	15	823		
Beef Cattle	9773	241410	Yes	Yes
Bison	75	1631	Yes	
Chicken	1936	14752	Yes	
Dairy Cattle	7187	253113	Yes	Yes
Elk	4	340		
Goat	490	10579	Yes	Yes
Honey Bee	3	21		
Horse	20	150	Yes	
Nematode	19169	19169		
Pig	1537	217703	Yes	Yes
Screwworm	10	19350		
Sheep	2832	65093	Yes	Yes
Turkey	242	624	Yes	
Yak	4	111	Yes	
<b>TOTAL: 17</b>	<b>50328</b>	<b>948018</b>		





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# **NIFA Update for NCRA Spring Meeting**

**Parag Chitnis and Tim Connor**

**Deputy Director**

**National Institute of Food and Agriculture**



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# Staffing Update

## Recently hired NPLs

- Karelyn Cruz
- Michelle Colby
- Alicia Frame
- Ariela Zucherman
- Tesfamariam Mengistu

## Open Positions

- (NIFA Director)
- PARS Director
- Food Safety Division Director
- Numerous NPLs



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# Budget Request FY 2019





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<https://www.obpa.usda.gov/19nifa2019notes.pdf>

2019 President's Budget  
National Institute of Food and Agriculture

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# Budget for FY 2018



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**Thank you**



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## Highlights of FY2018 Appropriation

» AFRI	+25	» VMLRP	+1.5
» SARE	+8	» FARAD	+1.25
» NIFA move	+6	» Aqua Centers	+1
» 1994 R and E	+4	» Potato Breeding	+.25
» Food Safety Outreach	+2		

## FY2018 - AFRI status

- » **Sustainable Agricultural Systems**
  - All challenge areas have been concluded
- » **Foundational and Applied Science**
  - **FACT**
  - **Microbiome**
- » **Education and Workforce Development**
  - **REEU sites with FACT emphasis**
- » **Interagency activities**



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## **AFRI- Interagency Activities in 2018**

- » **National Robotics Initiative (led by NSF)**
- » **Cyberphysical Systems (led by NSF)**
- » **Plant-Microbe Interactions (with NSF)**
- » **Ecology and Evolution of Infectious Diseases (with NSF, NIH, BBSRC)**
- » **INFEWS (with NSF)**
- » **Dual Purpose Research (with NIH)**
- » **Biomarkers for nutrition (with NIH)**
- » **Feedstock genomics (with DOE)**
- » **Breakthrough Technologies EAGERs (with NSF and BBSRC)**
  
- » **Plant and animal health (with Irish agencies)**

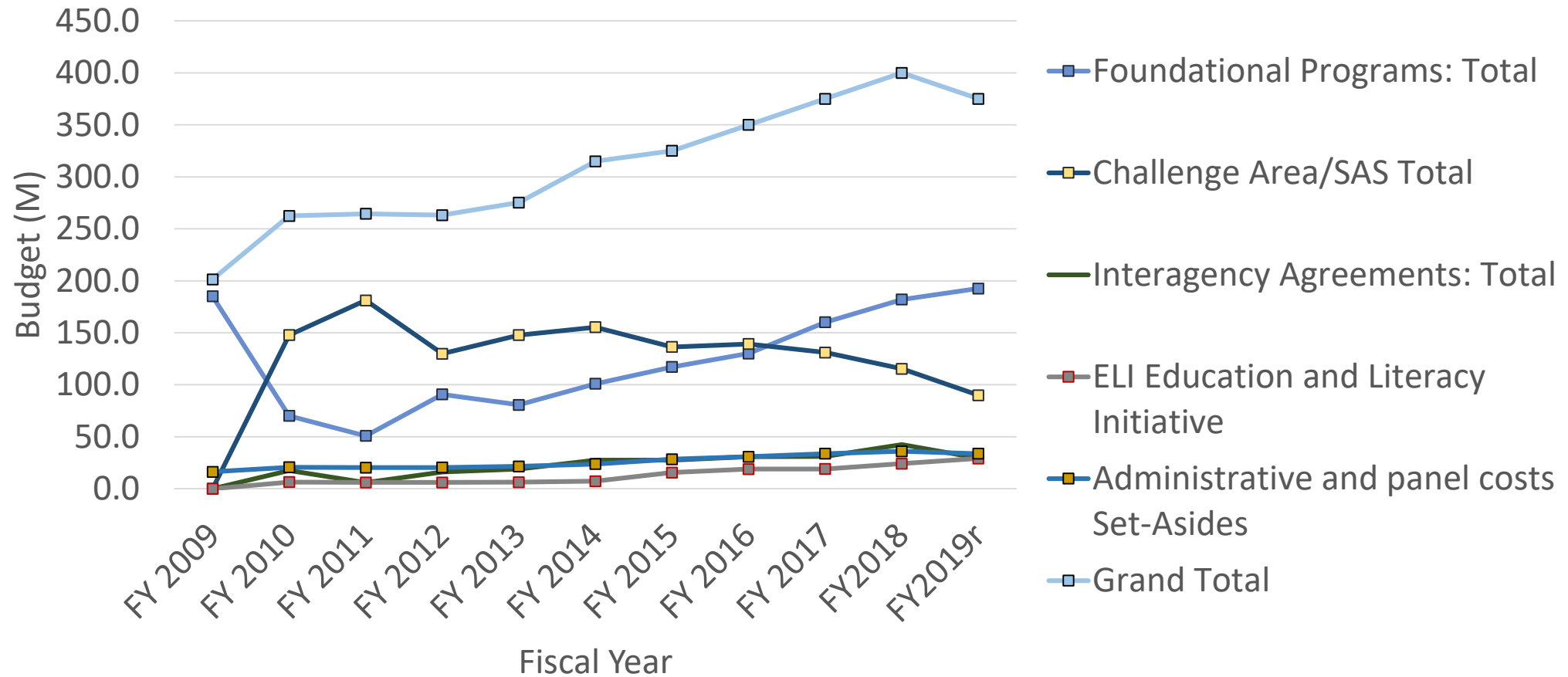


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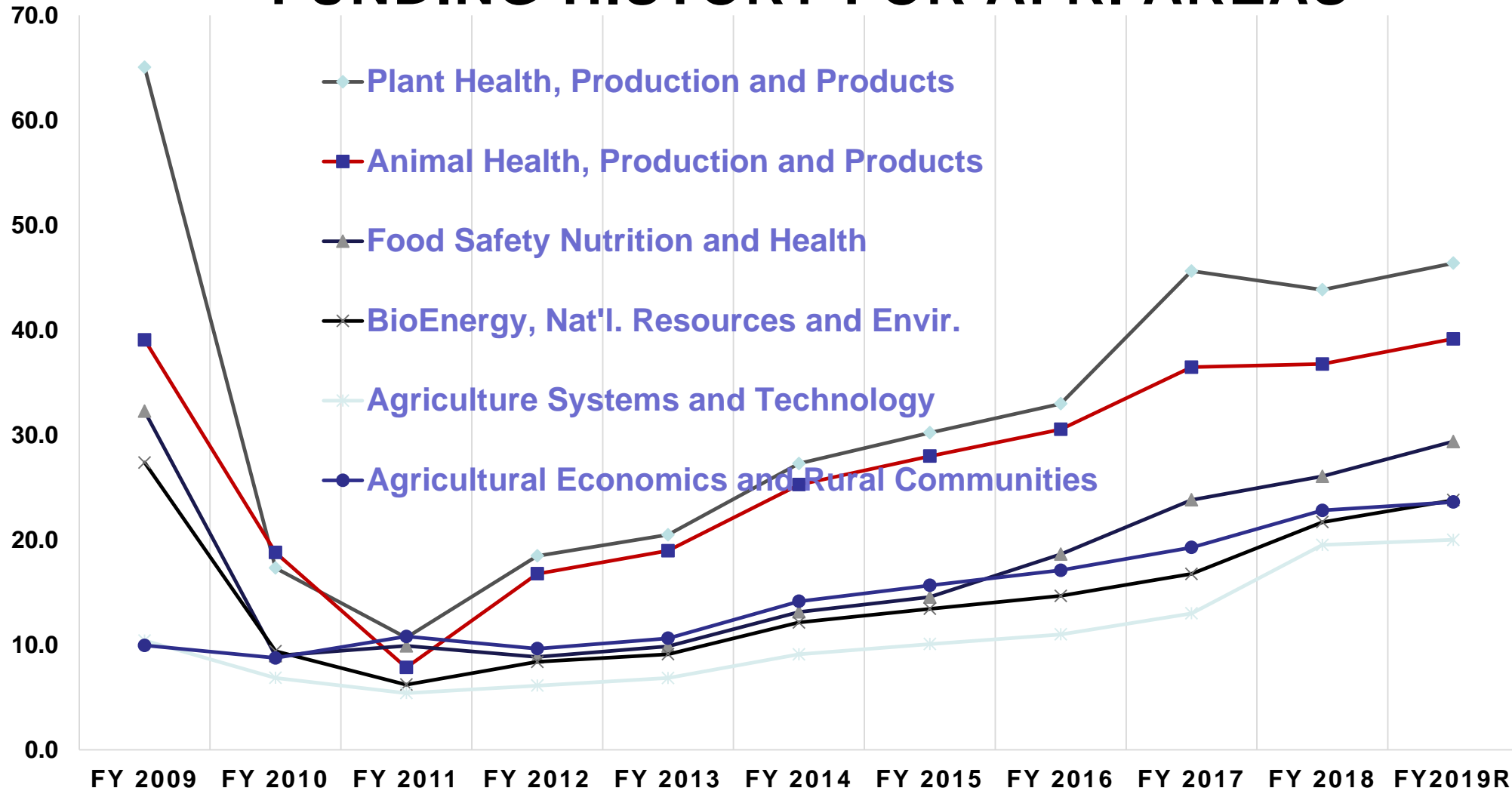
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# AFRI Budget Over Years



# FUNDING HISTORY FOR AFRI AREAS







# FACT Roadmap

Focus on Open Data **FAIR** principles:  
**Findable, Accessible, Interoperable, and Re-usable**

- » Community Building
- » Data Design and Implementation
- » Analysis and Technology
- » Small data to Big data in public domain
- » Training and Education

2016

- » Stakeholder Input
  - Ideas Engine
  - Data Summit

2017

- Refining Priorities
  - Domain Workshops
  - Catalytic Projects

2018

- AFRI Priority Areas
- FACT REEUs
- Innovation through SBIR

2019-



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# FACT Workshops

<b>Moving Livestock Research Forward</b>	<b>Reecy</b>	<b>Iowa State University of Science and Technology</b>
<b>High Throughput, Field-Based Phenotyping Technologies for the Genomes to Fields (G2F) Initiative</b>	<b>Schnable</b>	<b>Iowa State University of Science and Technology</b>
<b>A Workshop to Plan an International Cyber-infrastructure for On-farm Production Research</b>	<b>Bullock</b>	<b>Board of Trustees of the University of Illinois</b>
<b>Satellite Data and Modeling Workshop - Use of Remote Sensing Technologies To Advance Crop Productivity</b>	<b>Mockler</b>	<b>Donald Danforth Plant Science Center</b>
<b>Big Data Analytics in Plant Breeding and Genomics - A Digital Agriculture Symposium</b>	<b>Shakoor</b>	<b>Donald Danforth Plant Science Center</b>
<b>Identifying obstacles to applying big data to high-resolution decision-making in production agriculture</b>	<b>Thomasson</b>	<b>Texas A&amp;M AgriLife Research</b>
<b>Database Integration Workshop: Building the Data Capacity for Food-Energy-Water Research</b>	<b>Yao</b>	<b>North Carolina State University</b>
<b>Empowering Small and Medium-Sized Limited Resource Farmers: Inclusive Rural Development Stemming from Digital Agriculture</b>	<b>Colletti</b>	<b>Iowa State University of Science and Technology</b>
<b>Serving Small-Scale, Limited Resource and Underserved Farmers Through Data and Knowledge Sharing Platforms: Bridging the Big Data Divide</b>	<b>Bonsi</b>	<b>Tuskegee University</b>
<b>FACT Workshop: Driving Innovation through Data in Agriculture DIDAg: data management and publication for researchers and information scientists</b>	<b>Parr</b>	<b>Agricultural Research Service</b>
<b>Soil Organic Matter Data Synthesis and Visualization Working Group</b>	<b>Thompson</b>	<b>University of Georgia</b>



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# FACT Workshops to Science Priorities

- » Genome to phenome-plant and animal
- » Crop Production
- » Big Data for Small Farmers
- » Environmental data
- » Data policy and access



2018

**Research Projects**

**Networks**

**Written Short  
Summary  
of Outcomes**



2019

**RFA  
priorities**

2020

**Budget  
Request**



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# NIFA Listens



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# General Features of Stakeholder Comments

## » Systems

- Interconnected nature of systems
- Systems issues included economic, social, agricultural, ecological, and technical systems

## » Solutions

- Data and technology as solutions to better manage agricultural systems.
- Extension, education, and community development as central to improving agriculture.
- The need to strengthen communication between research and extension.

### Online

840 participants

### In Person

75 speakers

395 attendees

NIFA Listens

# Theme 1: Data and Technology



- » 124 organizational and 118 personal opinions (40% of all comments)
- » Major areas were data (15%), genomics (9%), precision agriculture (6%), diagnostics (6%), robotics (4%), gene editing (3%), and sensors (3%).



## Theme 3: Economics



- » 105 organizational and 99 personal opinions (34%)
- » This dimension was seen as crucial, particularly in the context of sustainability.
- » The social dimension was seen as intertwined, with 50% of the economics comments relating to social and sustainability dimensions.
- » Labor (4%) was a related area that came up in the context of economics (2%) and more generally (2%).





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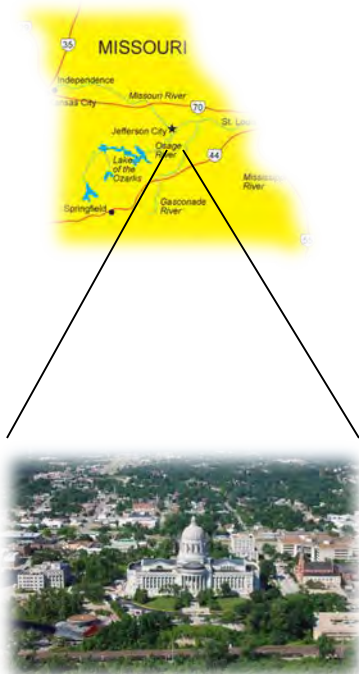
**How do we highlight  
importance of capacity programs?**



Lincoln University

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UNIVERSITY  
MISSOURI

## **LINCOLN UNIVERSITY of MISSOURI**



- **Founded in 1866 by the 62<sup>nd</sup> and the 65<sup>th</sup> Colored Infantry**
  - *Only institution by Civil War veterans*
  - *~152-year history*
- **1890 Land-Grant (HBCU), Public State University**
  - *Oldest 1890 HBCU in United States*
  - *The second land-grant University in State of Missouri*
- **Located in Jefferson City, the State Capital**
- **An Four-Year, Comprehensive State University**
  - *Integrating education, research, & extension*
  - *Both undergraduate and graduate programs*
  - *Fully accredited institution by HLC*
- **Ranked among the best HBCU by US News & World Report**



## **MISSION STATEMENT**

*Lincoln University of Missouri is a 1890 land-grant, HBCU, public, comprehensive institution that provides excellent educational opportunities including theoretical and applied learning experiences to a diverse population within a nurturing, student-centered environment through experiential learning, cutting-edge research, and outreach activity.*



# ***COLLEGE OF AGRICULTURE, ENVIRONMENTAL, & HUMAN SCIENCE***



## • Academic Programs

- ✓ *BS in Ag. Sci*
- ✓ *MS in Ag. & Env. Sci*
- ✓ *Collaborative PhD*

## • Cooperative Research Programs

- ✓ *Animal Sci*
- ✓ *Plant & Soil Sci*
- ✓ *Food Safety & Nutrition*
- ✓ *Natural Resource Management*
- ✓ *Social-Economics*

## • Cooperative Extension Programs

- ✓ *Small Farm, Small Ruminants, Horticulture*
- ✓ *IPM, Plant Pathology, Organic farming*
- ✓ *4-H Youth Development, Human Health & Nutrition, Minority Health & Aging*





# Cooperative Research

## **ANIMAL SCIENCE PROGRAM**

### Small Ruminants:

- *Parasite resistant genetics & breeding*
- *Foot rot disease gene marker and control*
- *Nutritional grazing*
- *Brush & weed control*
- *Optimal Cattle production*



### Aquaculture:

- *Bluegill & Sunfish genetics & breeding*
- *Fish nutrition and nutritional diets*
- *Optimal operation system and practices*
- *Food fish production*



Collaborators: MU, UArk, NCRAC, OSU

Funding: NIFA, DHS, NCARC, MDOA



# Cooperative Research

## **PLANT SCIENCE PROGRAM**

- *Optimal & environment-safe hydroponic & aqua-hydroponic production*
- *Soybean genetics & breeding*
- *Organic farming practices & management*
- *Biological control of plant diseases*
- *High tunnel vegetable production*
- *Value-add specialty crops*
- *Integrated pest management*



Collaborators: **MU**

Funding: **NIFA-AFRI, CBG, NRCS, EPA, MDNR, MDOA**



# Cooperative Research

## **NATURAL RESOURCE PROGRAM**

- *Remote sensing technology for health assessment of forestry ecosystem*
- *Remediation technology of metal or pesticide-contaminated soils*
- *Environmental impacts of nano material application*
- *Bioaccumulation of environmental contaminants*
- *Water quality assessment in Ag watershed*
- *Cost-effective drinking water treatment for rural community*
- *Wildlife management*

Collaborators: *MU, MST, ARS*

Funding: NIFA, NRCS, EPA, AFRI, NSF  
MDNR, MDOC



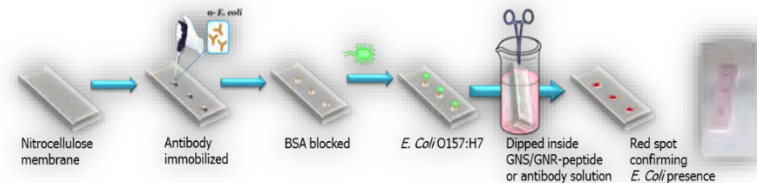
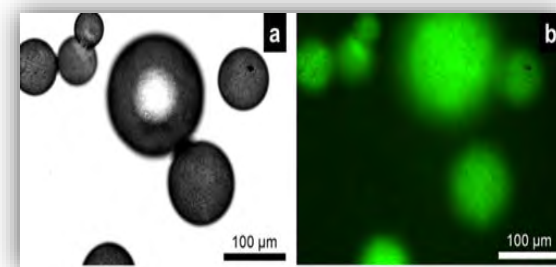


## **FOOD SAFETY & NUTRITION** **PROGRAM**

- *Development of micro and nano sensors for detection of food contamination*
- *Biological control of vegetable-borne pathogen & bacteria*
- *Gene marker differentiation of environmental and fecal E. Coli for source-tracking*
- *Clinical and biochemical markers associated with obesity and metabolic syndrome*

Collaborators: *MU*

Funding: *NIFA, NSF, NASA, EPA, AFRI*







## **SOCIAL-ECONOMIC PROGRAM**

- *Youth entrepreneurship for economic empowerment*
- *Rural community development in the southeast region of Missouri*
- *Impact assessment of farm size on biomass feedstock supply*
- *Farmer's attitude and social acceptability survey on biomass production and supply*

Collaborators: *MU*

Funding: *NIFA*





# Cooperative Research

## **RESEARCH FACILITY**

- *Small Animal Research Center*
- *Richard Dickinson Plant Research Center*
- *Aquaculture Research Center*
- *Center of Excellence in Environmental Science*
- *Center of Excellence in Geospatial Science*
- *Center of Nanotechnology*
- *Well-equipped laboratories*
  
- *George Washington Carver Farm*
- *Alan T. Busby farm*
- *Freeman Farm*

Funding: NIFA, NSF, DOD, NRCS, NCARC





## **HIGHLIGHTS OF RESEARCH PROGRAMS**



- ✓ *In alignment with USDA top research priority areas*
- ✓ *Integration of education, research and extension*
- ✓ *Complementary programs with MU*
- ✓ *Strongly extramural grant supported*
- ✓ *Diverse and productive faculty*
- ✓ *National and international collaborations*
- ✓ *The state lead in small ruminant research*
- ✓ *The regional lead in aquaculture research with the largest aquaculture facility*
- ✓ *State largest certified organic farm*



**Time, Effort & Hard Work Pays Off!**

## **CURRENT CHALLENGES**

- *Student recruitment and retention*
- *Under the state-match or unstable state funding*
- *Limited research capacity*
- *Limited faculty expertise*

## **GOALS OF COLLABORATION**

- *Collaborative academic programs*
- *Student and faculty exchange*
- *Resources or facility sharing*
- *Joint grant development*
  - ✓ *State agencies: MDOA, MDOC, MDNR, etc.*
  - ✓ *Federal agencies: USDA (CBG, AFRI), NSF (HBCU-UP), EPA, NASA (MUREP), DOD, etc.*
  - ✓ *Industrial & Private: MSMC, etc.*





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## Iman Page Library



**NCRA**  
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**April 3, 2018**



## 62 and 65 Colored Infantry

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COOPERATIVE  
EXTENSION

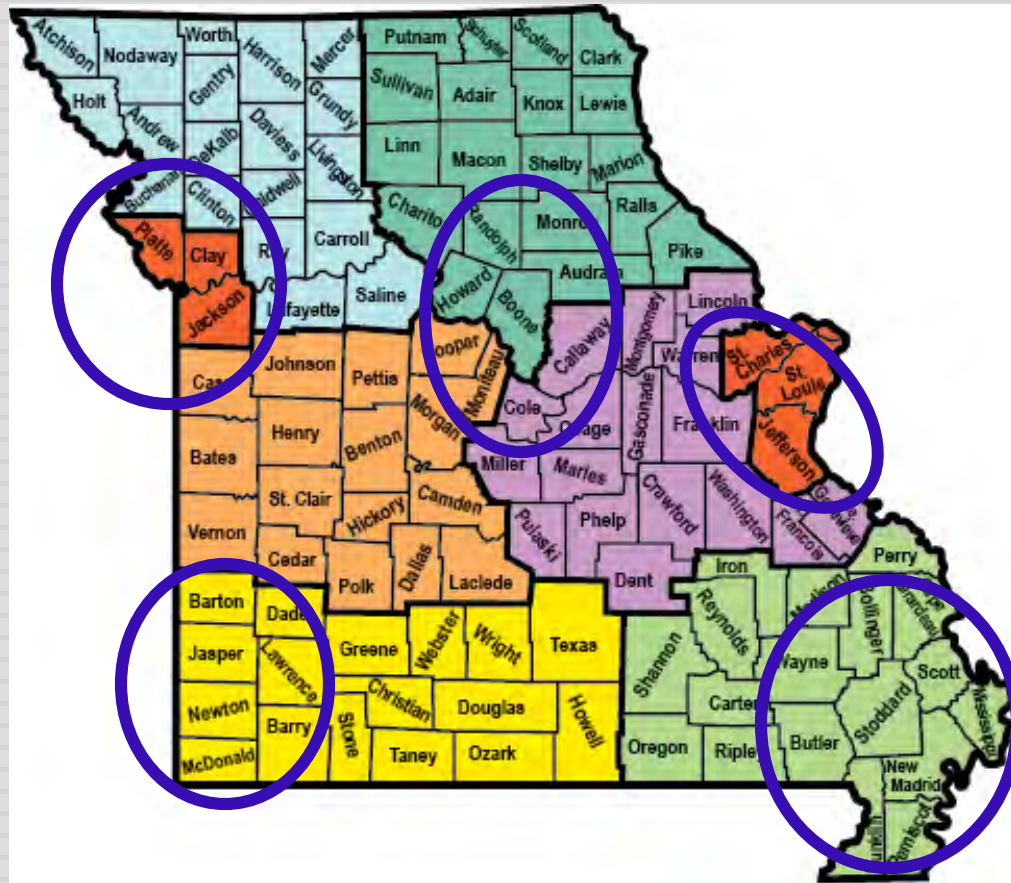
LUCE

**THE BEST IN THE MIDWEST**



# Program Areas

- ◆ **Agricultural Economics and Marketing**
- ◆ **Aquaculture**
- ◆ **Community Leadership and Development**
- ◆ **Food and Nutrition/EFNEP**
- ◆ **Human Resource Development**
- ◆ **Innovative Small Farm Program**
- ◆ **Integrated Pest Management**
- ◆ **Plant Pathology**
- ◆ **Small Ruminant Program**
- ◆ **4H and Youth Development**



## Program Delivery Areas



- ◆ **Lincoln University Campus**
- ◆ **Southeast Missouri**
  - Lilbourn**
  - Sikeston**
  - Caruthersville**
  - Charleston**
- ◆ **Kansas City**
- ◆ **St. Louis City and County**
- ◆ **Southwest Missouri**

**Associate Administrator**

**Lincoln University Cooperative Extension**



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## Benjamin Allen Hall



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Charleston, Missouri



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## Caruthersville Youth Development



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## St. Louis Urban Impact Center



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## Kansas City- Moving for Good Health



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## Paula J. Carter Center on Minority Health and Aging



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Thank you – Thank you – Thank you - Questions?



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**April 3, 2018**

# A Recap - Moving from Diversity to Inclusion: A Developmental Process

**Presented by**

**Pamala V. Morris, PhD.**

**College of Agriculture, Purdue University and**

**Patreese Ingram, PhD.**

**College of Agricultural Sciences, The Pennsylvania State University**

**NCRA Spring Meeting**

**April 3, 2018**



# Intercultural Competence is Imperative

- ▶ Increasing our “Intercultural Competence” is a core capability in the 21<sup>st</sup> century and involves:
  - ▶ Opening our minds to different people, cultures, and opportunities!
  - ▶ Ability to recognize, understand, and adapt to differences
  - ▶ Enhanced cultural self-awareness
  - ▶ Developing empathy – being able to understand someone else’s thoughts and emotions!



# Intercultural Transformation

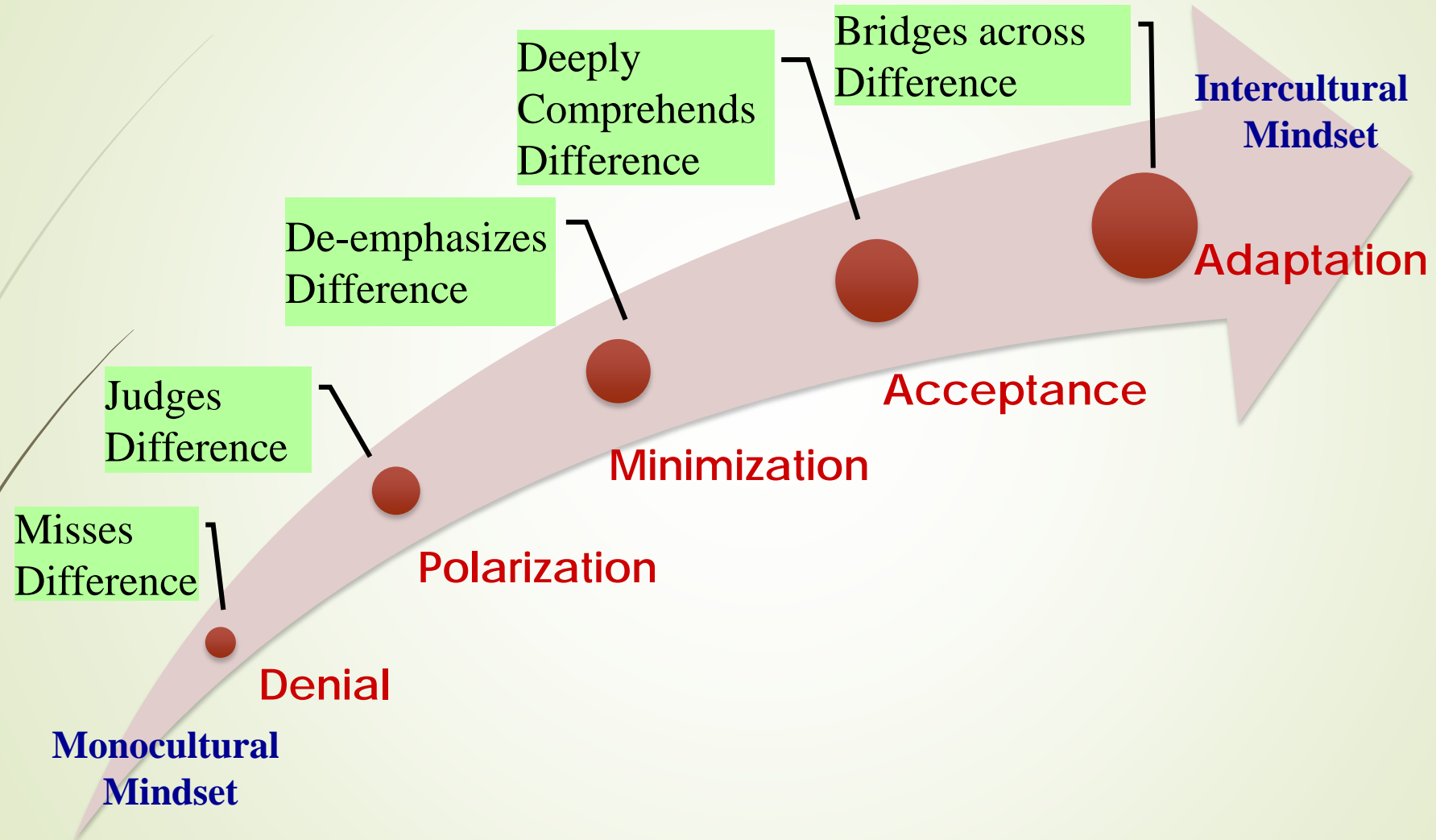
- ▶ We can help others---and ourselves---transform through engaging in a four step process:
  - ▶ Increasing awareness of our own characteristic ways of making meaning in familiar and unfamiliar cultural environments;
  - ▶ Increasing awareness of others' ways of making meaning in familiar and unfamiliar cultural environments;
  - ▶ Managing our emotions and thoughts (EI) in the face of ambiguity, change and challenging circumstances;
  - ▶ Bridging cultural gaps between ourselves and others ---shift our perspectives, attuning our emotions and adapting our behavior in effective and appropriate ways.



# Our Responsibility

- ▶ Leaders play an important role in setting the tone for the shift towards increased diversity and inclusiveness in an organization. Open, effective communication, as well as clear channels for feedback optimizes the opportunity for discussion of issues related to inclusion and/or discrimination. Every organization starts from a different place and in a unique context, but all have room for improvement.

# Intercultural Development Continuum: Primary Orientations

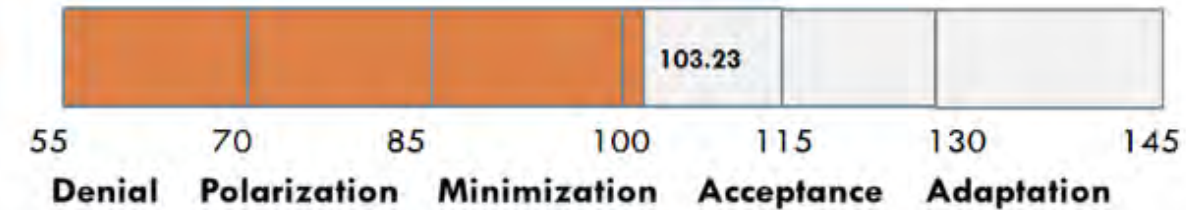


# IDI Group Profile Feedback- North Central Region

## Perceived Orientation (PO)



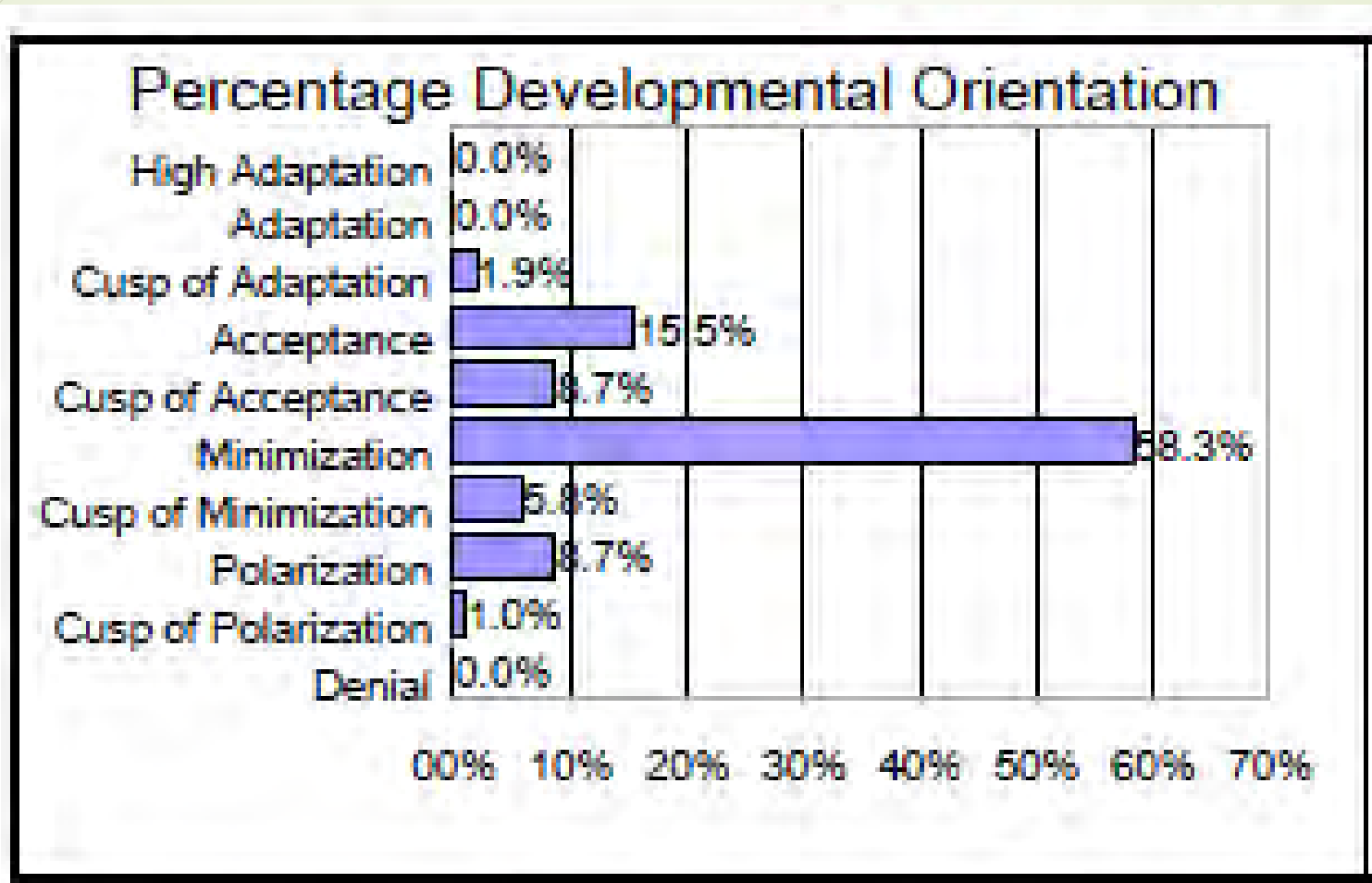
## Developmental Orientation (DO)



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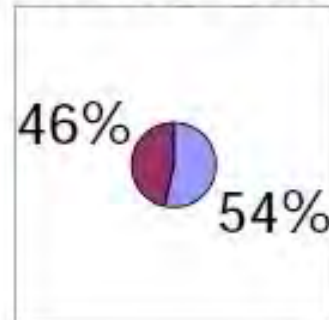


# IDI Group Profile Feedback- Total Group



# Percent of Resolution

Percent of Resolution of  
Polarization (Cusp of  
Polarization, Polarization) from  
Defense and Reversal



■ Defense

■ Reversal



# Polarization

- Judgmental orientation that views cultural differences as “us” versus “them”
- Defense: uncritical view of own culture and overly critical of other cultural values and practices
- Reversal: overly critical of own culture, values, and practices and uncritical view of other cultures



# Polarization: Developmental Task

- Mitigate polarization by emphasizing our “common humanity”
- 



# Minimization

- Highlights cultural commonality and universal values and principles that may mask deeper recognition and appreciation of cultural differences and diversity



# Minimization: Developmental Task

- ▶ Develop cultural self-awareness
- 



# Acceptance

- Recognizes and appreciate patterns of cultural differences and commonality in one's own and other cultures
- 



# Acceptance: Developmental Task

- Refine analysis of cultural contrasts
- 





# Adaptation

- ▶ Capable of shifting cultural perspective and changing behavior in culturally appropriate and authentic ways
- 



# Adaptation Developmental Task

- Develop frame of reference shifting skills
- 



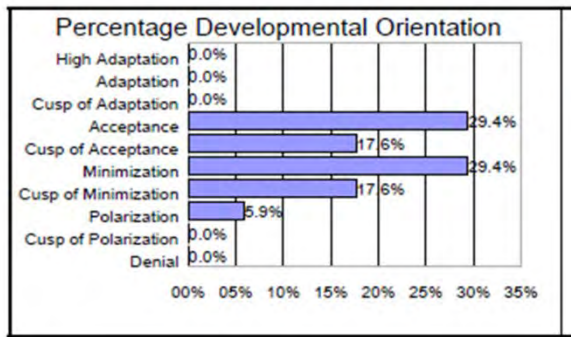
# Mindset Summary

- Denial: “I’ve never had to think about racism.”
- Polarization: “We have a lot to teach these people.”
- Minimization: “No matter what their culture, people are pretty much motivated by the same things.”
- Acceptance: “Where can I learn more about (x) culture to be more effective in my communication?”
- Adaptation: “I can maintain my values and also behave in culturally appropriate ways.”

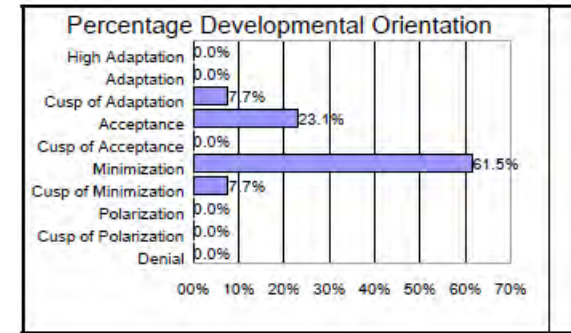
Jason D. Patent, Ph.D. at Fostering Global Citizens Through Intercultural Leadership Development  
2 March 2016 | APAIE Melbourne

# Regional Profiles

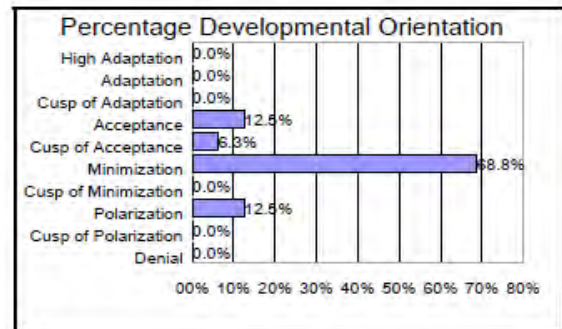
## North Central



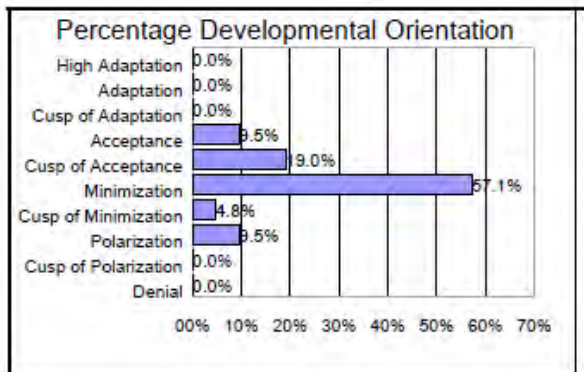
## North East



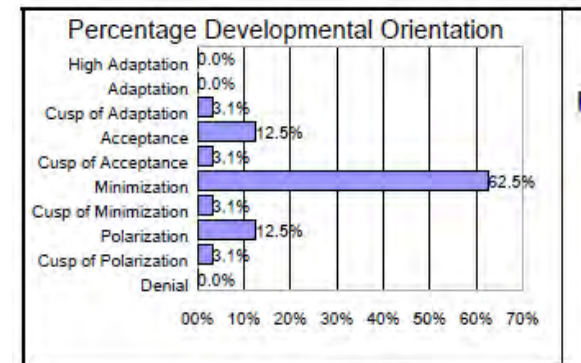
## ARD



## Western



## Southern





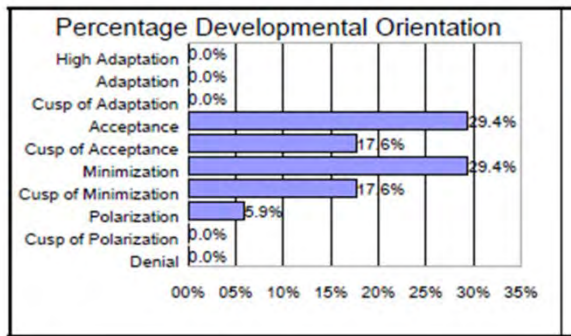
Denial Polarization Minimization Acceptance Adaptation

## Similarities and Differences Across Regions

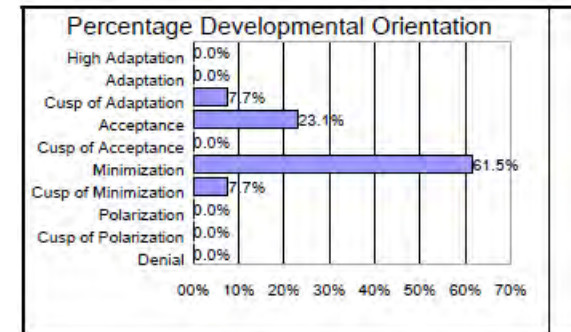
- For each of the 5 regions, the Perceived Orientation is in **Acceptance** and the Developmental Orientation is in **Minimization**
- Overall, Minimization tends to be where the highest % of individual participants land on the continuum
- However, the spread among participants varies across regions
  - ▣ NC Region has the tightest spread
  - ▣ Southern Region scores vary all the way from the Cusp of Adaptation to Cusp of Polarization

# Regional Profiles

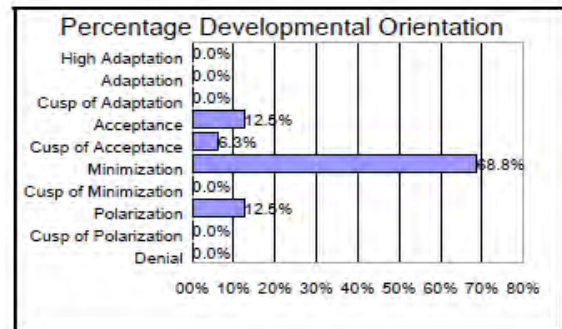
## North Central



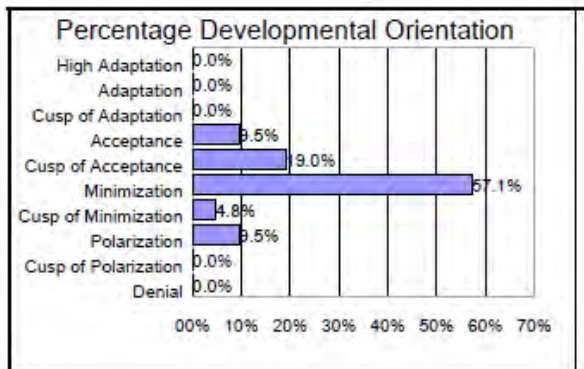
## North East



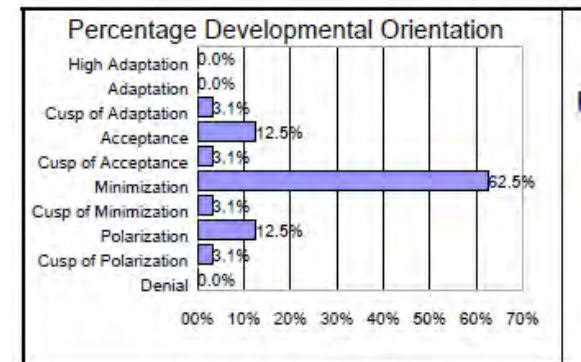
## ARD



## Western



## Southern



## Similarities and Differences Across Regions

- The % at Polarization tends to be smaller in all regions
- The % at Cusp of Adaptation is even smaller.
- No one scored all the way in Adaptation, and no one scored well into Denial
  - ▣ Although there were a small percentage that scored at the Cusp of Adaption and an even smaller percentage that scored at the Cusp of Polarization

## **Similarities and Differences Across Regions**

- Acceptance is the leading orientation for all regions as a whole
- For all regions, the groups were resolved in terms of cultural disengagement – meaning that the groups are not experiencing a sense of being disconnected from their primary cultural community.



# Gaps between PO(Perceived Orientation) and DO (Developmental Orientation)

- Range from 19.05 – 24.25

**Average for all 5 regions                      22.89**

- NE                      19.05
- NC                      22.06
- ARD                      22.53
- West                      24.02
- South                      24.25



## **At a Monocultural Mindset...**

It is likely that the group will struggle with making decisions and solving problems when cultural differences arise that demand creative solutions in ways that value the differences

# Goal

- To move to the next orientation on the cultural competence continuum



# Some Recommendations Pulled From Various Individual Development Plans

- Attend training programs that focus on intercultural relations.
- Take classes that focus on cross-cultural communication and cross-cultural relations, or ethnic or gender studies.
- Read books that describe and explain patterns of cultural differences and similarity. Books can provide insights into the history and cultural norms of culturally diverse groups. The settings may be domestic or international, novels or fiction.

# Select Book Recommendations:

*Blind Spot: Hidden Biases of Good People* –  
Mahzarin R. Banaji and Anthony G. Greenwald

*Whistling Vivaldi: How stereotypes affect us and what  
we can do* – Claude M. Steele

*Americanah* – Chimamanda Ngozi Adichie

*Invisible Man, Got the Whole World Watching: A Young  
Black Man's Education* – Mychal Denzel Smith

*Privilege, Power, and Difference* - Allan G. Johnson

*The Rearranged Life* – Annika Sharma

# Select Book Recommendations:

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- *Microaggressions in Everyday Life: Race, Gender, and Sexual Orientation* – Derald Wing Sue
- *What If?: Short Stories to Spark Diversity Dialogue* – Steve Robbins

# Some Recommendations Pulled From Various Individual Development Plans

- Take the opportunity to attend cross-cultural theatre/film/art events to increase your own self-awareness as well as learn about the cultural perspective found in the theatre/film/art work.

# Some Recommendations Pulled From Various Individual Development Plans

- Engage in intentional work-related, personal, social, or community interactions with people from different cultures. Focus on communication that provides insights into how people from other cultures experience the world and how their experiences are similar and/or different from your own.



# Some Recommendations Pulled From Various Individual Development Plans

- Ask for input from trusted colleagues and friends from outside your cultural group to share their experiences of common ways they are misunderstood, what assists them in feeling accepted in their communities and what strategies are successful for them in adapting across cultural difference.

# Some Recommendations Pulled From Various Individual Development Plans

- Consult with those from outside your cultural group about policies and decisions at work to discover how they might be perceived from multiple perspectives.



These are just some of the ways we can increase our cultural understanding and appreciation. What are other steps you have taken to increase your cultural competence?

# 2018 NCRA Spring Meeting:

## Questions to Ponder

- Do you change your leadership style as a result of a deeper understanding of the culturally different expectations of others? Why or why not? Please share an example.
- Do you consciously think about how your communication approach may reflect a particular cultural mindset and may not be equally accessible, for example, to your staff, faculty, department heads, upper administration and/or stakeholders/(potential stakeholders), who may communicate in culturally different ways?
- Reflect on how your hiring practices or your interviewing questions may reflect a particular cultural mindset. How might this impact an interviewee who may express their professional accomplishments and skills in different ways?