Q1/2016 Report



A COMMUNICATIONS AND MARKETING INITIATIVE OF THE Administrative heads section Cooperative extension section Experiment station section OF THE APLU BOARD ON AGRICULTURE ASSEMBLY



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I. EXECUTIVE SUMMARY

During this quarter, kglobal continued to bolster our traditional and digital media efforts to meet our primary goal: educating our audiences — namely, members of Congress, industry leaders, and the media — about the importance of the American land-grant university system and its contribution to all facets of society. This report showcases kglobal's activities over the past quarter as broken down into five categories:

- Traditional Media
- Digital Media
- Monthly Newsletter
- Events
- Miscellaneous

TRADITIONAL MEDIA HIGHLIGHTS

We coordinated with researchers, scientists, Extension educators, and communications specialists to draft and place numerous landgrant stories. These stories showcased local, regional, and national research, teaching, and Extension efforts by land-grant universities and institutions. We shared the stories with our audiences using our monthly newsletter, website, and social media platforms.



DIGITAL MEDIA HIGHLIGHTS

Our digital media strategy continued to emphasize the identification and recruitment of influential followers likely to engage with our content. To identify them, we continued to test audience segmentation tactics to reach specific regions and demographics; to recruit them, we continued to execute an enhanced social media strategy with refined, targeted copy. As a result of our efforts, we saw engagement continue to increase across our digital platforms.

DIGITAL MEDIA

	-
Website Posts	66
Website Page Views	3,059
Tweets	450
Twitter Followers	22.5K
Facebook Posts	129
Facebook Followers	12.5K

NEWSLETTER **** Our newsletter reach continues to expand.				
Newsletter List (2012)	86			
Newsletter List (Present)	462			
Website Subscribers	119			
Newsletters Issued in Q1	9			
Average Open Rate	30.6 %			
Average Click Rate	14.6 %			

MONTLHY NEWSLETTER HIGHLIGHTS

We issue a monthly newsletter that recaps our efforts and includes some of our most popular content. We reach internal and external audiences, send the newsletter via email, post it on our website, and share it across our social media platforms. Since re-implementing this newsletter, we have seen a tremendous growth in organic signups from our website.

EVENTS HIGHLIGHTS

We attended two events – CARET/AHS and ECOP Meeting – where we discussed the importance of AgIsAmerica, shared best branding and messaging practices, and updated internal stakeholders, from communications specialists to deans and directors, on AgIsAmerica's efforts. Next quarter, we will continue to explore innovative ways to highlight AgIsAmerica's efforts.

MISCELLANEOUS HIGHLIGHTS

This quarter we highlighted research, teaching, and Extension as well as the general importance of the land-grant system in a variety of ways. For instance, members of the AgIsAmerica team promoted a Lunch-N-Learn Session on Capitol Hill and continue to serve on the National Impact Database Committee. In addition, working with Cornerstone, we created a list of a hashtags to denote funding sources and streams for land-grant research, teaching, and Extension, and we attended the North Central Cooperative Extension Association (NCCEA) presentation about Family Consumer Sciences to USDA-NIFA, with whom we continue to work closely.

II. TRADITIONAL MEDIA

We implemented an aggressive traditional media strategy, encompassing print, broadcast, and corresponding online news sites. We shared stories highlighting research, teaching, and Extension with national audiences; better established scientists, Extension educators, and researchers as credible messengers and sources of information; and furthered our relationships with university communications specialists and the media. Our efforts resulted in 600 media hits with 268.2 million impressions as well as significant engagement with media contacts and influencers.

Stop the spread of Johne's and tuberculosis

JOHNE'S disease and bovine tuberculosis complex are two prevalent mycohacterial diseases in the United States that cause harm to the livestock industry through production losses and trade restrictions. Thirteen land-grant institutions and partner organizations are working to develop and enhance tools needed to limit the spread of these two diseases.

The participating land-grant

institutions include: University of California, Davis Colorado State University Cornell University University of Georgia Michigan State University University of Minnesota University of Missouri University of Nebraska-Lincoln Pennsylvania Cooperative Extension Pennsylvania State University University of Tennessee University of Vermont University of Wisconsin

The Multistate Research Project NE-1201 was formed to fill knowledge gaps, improve diagnostics and vaccines, and strengthen outreach programs for both diseases. NE-1201 is supported, in part, through USDA's National Institute of Food and Agriculture. More information can be found at www. mycobacterialdiseases.org.

HOARDS DAIRYMAN

MEDIA LISTS

We continue to expand our media lists and strategically engage with journalists and reporters on social media. Our media lists reflect both location and beat, or a reporter's topic of interest and areas of expertise. We sent traditional media pitches and interacted with reporters over social media. By doing so, we both reinforced the AgIsAmerica brand and increased the cohesiveness of our traditional and digital media campaign.

Next quarter, we will continue to create more regional and state-specific media lists with local, national, and trade contacts. Using these lists, we will continue to invite media to engage with AgIsAmerica, including but not limited to signing up for our newsletter or participating in our Twitter Town Halls.



Sharing trending content demonstrates that our campaign is tapped into local, regional, and national media conversations surrounding agriculture, Extension, and higher education. Overall, our engagement article strategy continues to enhance recognition of both the AgIsAmerica brand and the land-grant system.

EDITORIAL CALENDAR

To guide our traditional and digital media efforts, we updated our editorial calendar with local, regional, national, and evergreen news hooks from January through March. Last quarter, we created a draft 2016 editorial calendar, outlining evergreen news hooks for the entire year, and we continue to update that master editorial calendar as additional news hooks arise.

RELATIONSHIPS WITH THE MEDIA

We continued to increase our interactions and correspondence with members of the media. During the quarter, we engaged with numerous media contacts and as previously discussed, greatly expanded our media lists.

We have interacted with members of the media via traditional media and social media, especially on Twitter. Specifically, we sent personalized emails or direct messages; crafted personalized tweets; favorited media content; and retweeted media content. We also shared more examples of trending content, which we call engagement articles, on our platforms. These engagement articles include APLU content, USDA-NIFA blogs, articles by target reporters, Extension recipes, teaching highlights, and research success stories. By doing so, we create additional opportunities for organic engagement.

> Ag is America @agisamerica · Mar 23 This study of seeds has been 137 years in the making @fionajmacdonald @ScienceAlert bit.ly/1ULhQmW.



🖪 You Retweeted

Modern Farmer @ModFarm · Mar 25

Cool! This New Zealand farmer uses his sheep to write messages in pasture: ow.ly/ZVqJg



Our editorial calendar intentionally highlights national news hooks that align with the topics listed on the AgIsAmerica website. This helps us synchronize our traditional media pitches with our digital branding. Since the news topics on our website also reflect the topics on the Land-Grant Impacts website, we indirectly synchronize our brand with the website and National Impact Database. Most importantly, our editorial calendar highlights news hooks related to our themes of health, nutrition, and water security.

Our editorial calendar follows the legislative calendar, highlights national observances, and includes university-specific events, such as Extension workshops and research milestones. It also helps us prioritize content and coordinate our messaging across all platforms.

We also align university stories with our news hooks. By doing so, we help insert land-grant universities into timely, relevant conversations occurring in traditional media as well as on Twitter, which is the social media platform where reporters, bloggers, and news affiliates congregate, and Facebook – the largest social media platform.

In addition, we continue to share our editorial calendar with university communications specialists on a monthly basis. On the one hand, this communication effort enables us to encourage universities to engage with AgIsAmerica. On the other, we establish creditability with the communications specialists and encourage cross-marketing between AgIsAmerica and their respective land-grant universities. Overall, we continue to receive positive feedback as several communications specialists have asked to receive the news hooks, sent us content, and/or incorporate the recommended news hooks into their own collateral.

To view sample news hooks from our editorial calendar, please reference Appendix A.

To receive our news hooks and editorial calendar, please email ashley.hawn@kglobal.com and elliot.carter@kglobal.com.

RELATIONSHIP WITH COMMUNICATIONS SPECIALISTS

We identified and regularly communicated with representatives at every land-grant university in our designated districts. By fostering these relationships, kglobal receives more content for AgIsAmerica, which results in more traditional and digital media engagement opportunities.

Sharing our editorial calendar and campaign updates are prominent ways we build relationships with university contacts. In response to our monthly email, university communications specialists share additional news hooks and/or relevant stories, which are then reviewed for traditional media and digital media opportunities. Our email listserv has greatly expanded since we first implemented this monthly email correspondence last year. To date, our listserv includes over 100 contacts. In addition to sharing our editorial calendar, we re-implemented a regular newsletter – Why Ag Matters. By cross promoting the newsletter's content on all of our platforms, we fulfill a two-fold mission: encourage more university professionals to sign up for our newsletter and encourage more university contacts to send us content. We will discuss the newsletter in greater detail later in this report.

TRADITIONAL MEDIA EFFORTS

Our traditional media efforts spotlight multiple land-grant universities and institutions in our designated districts. We garnered 600 media hits and over 268.2 million impressions measured by circulation and website traffic.

We worked with land-grant university communications specialists, Extension educators, researchers, and other contacts to develop and share land-grant stories that aligned with national narratives already occurring in the news, such as the first day of Spring or New Years' resolutions. By calling attention to timely, relevant multistate or regional teaching, research, and Extension efforts, we showcased the importance of the entire land-grant system and its impact that often crosses state lines.

January Feature Story: Thirteen Land-Grant Institutions Advance Fight Against Mycobacterial Diseases

To view this feature story in full, please reference Appendix B.

February Feature Story: AgIsAmerica and the University of Nebraska-Lincoln's Institute of Agriculture and Natural Resources to Host Twitter Town Hall

To view this story in full, please reference Appendix C.

March Feature Story: Thirteen Land-Grant Universities Work Across State Lines to Improve Equine Farm Sustainability

To view this story in full, please reference Appendix D.

III. DIGITAL MEDIA

WEBSITE

As part of our engagement strategy, we continue to create new content and refine content copy. In order to maintain current traffic and drive new traffic to the website, we will continue to tailor our copy, from our hashtags to our tone, and utilize crossplatform promotion.

The AgIsAmerica website continues to act as the primary digital platform for coordination between the land-grant system, the Colleges of Agriculture, Agricultural Experiment Station, and Cooperative Extension. Our website hosts external content, projects brand consistency, and highlights our feature stories and original initiatives, such as Meet the Extension Educator(s) and / or Researcher(s).

Between January 1, 2016 and March 31, 2016, we added a total of 58 new stories, such as the story on coastal preservation below. We categorize these stories according to the following topics: Water Security; Nutrition & Health; Food Security; Youth, Family, and Communities; Environmental Stewardship; Agricultural Systems; and Energy & Bioproducts. These categories align with those listed on the National Impact Database to demonstrate cohesion and consistency across platforms and brands.

LGU Research Collaboration Helps Landowners Support Ecosystem and Reduce Erosion

A study funded by the Mississippi-Alabama Sea Grant Consortium into salt marsh restoration sees small, private landowners as crucial in protecting the economic and environmental wellbeing of the country's coastlines. A team of researchers from Mississippi State University, the University of South Alabama, Dauphin Island Sea Lab, the University of Connecticut, The Nature Conservancy and the Grand Bay National Estuarine Research Reserve collaborated to investigate how restoration can be most effective along the Gulf Coast.

Salt marshes are a vital natural resource acting to filter pollutants from runoff before they enter the sea and also help prevent erosion. They provide a habitat for animals and organisms on which commercially important seafood such as shrimp and fish are reliant.

Coastal hard management technologies such as sea wall construction are often favoured and result in reducing these salt marsh areas. However, the study sees soft management practices as proving the longer term and more sustainable option.

Read more here!

Posted on March 28th, 2016 by Ag Is America

The website received a total of 3,059 page views across 1,748 web sessions. In other words, the average visitor read 1.75 pages per visit, which is indicative of compelling content that keeps our website visitors' attention.

We use our website to highlight the important work being done at land-grant institutions, and we welcome videos, blog posts, and news articles to share with our audiences. To send suggested AgIsAmerica content, please email ashley.hawn@kglobal.com and elliot.carter@kglobal.com.

AGISAMERICA FEATURES SECTION

To increase awareness of AgIsAmerica and the land-grant system, we continue to populate our website's Features section, which functions as a unique newsfeed. This section hosts our monthly newsletter, our monthly feature stories, and content relevant to our goals and objectives. Between January 1, 2016 and March 31, 2016, we have shared 9 new pieces of collateral, which include the following:

- 1. January 2016: <u>Thirteen Land-Grant Institutions Advance Fight Against</u> <u>Mycobacterial Diseases</u>
- 2. January 2016: Why Ag Matters (AgIsAmerica's Monthly Newsletter)
- 3. February 2016: Overview of the FY2017 NIFA Budget
- 4. February 2016: Why Ag Matters (AgIsAmerica's Monthly Newsletter)
- 5. February 2016: <u>Meet the Water Productivity Researchers And Extension</u> <u>Educators, Drs. Steve Slack and Suat Irmak</u>
- 6. February 2016: <u>AgIsAmerica and the University of Nebraska-Lincoln's Institute</u> <u>of Agriculture and Natural Resources to Host Twitter Town Hall</u>
- 7. March 2016: Meet the Dietitian and Extension Educator: Alice Henneman
- 8. March 2016: <u>Thirteen Land-Grant Universities Work Across State Lines to</u> <u>Improve Equine Farm Sustainability</u>
- 9. March 2016: Why Ag Matters (AgIsAmerica's Monthly Newsletter)

The Q&A with Drs. Slack and Irmak, which was one of our features, represents another way we validate the creditability of scientists, researchers, and Extension educators as messengers – a lesson garnered from our 2015 message testing research. "Meet the Researcher(s)" or "Meet the Extension Educator(s)" will be a unique regular feature, aiming to highlight a researcher or Extension Educator each month. All of our Q&As are shared via traditional and digital media efforts.

To suggest AgIsAmerica features, please email ashley.hawn@kglobal.com and elliot.carter@kglobal.com.

SOCIAL MEDIA

We focused our efforts on increasing engagement between AgIsAmerica and key influencers, some of whom we identified through audience segmentation. Since social media is an active, ever-changing conversation, we continuously analyze our engagement strategies in order to stay relevant and influential in our thought space. Using our analysis, we adopt the most effective tactics for grassroots, grasstops, and influencer outreach.

Across our social media platforms, we shared numerous land-grant stories, blog posts, and impact statements that aligned with our editorial calendar. We also shared content that capitalized upon local news hooks and larger national conversations. Since investment and engagement in trending conversations is vital to the growth and continued success of the campaign, we regularly participate in ongoing, industry-specific conversations. To help our efforts, we creatively use trending hashtags and reference current events.

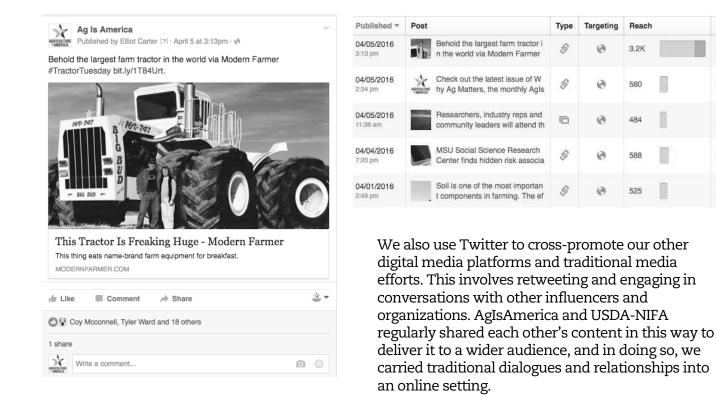
This strategy served two purposes. First, by providing this information to our follower base, we promoted the multifaceted efforts from land-grant institutions, ensuring a united voice for the land-grant system across the entire campaign. Second, engaging influencers in these conversations helped to drive organic, sustainable traffic to our digital media platforms, which in turn raised the profile of member universities and institutions.

To share and suggest research, teaching, or Extension updates, please email ashley.hawn@kglobal.com and elliot.carter@kglobal.com.

TWITTER

To date, AgIsAmerica has gained over 22,500 followers. Since Twitter is the leading "live" social media platform, it is important for AgIsAmerica to maintain a consistent newsfeed as well as effectively recruit and engage with followers. Our approach has evolved from a recruitment strategy to an engagement strategy in order to strengthen relationships with stakeholders and establish brand loyalty with influencers. Previously, we focused on recruiting a mass of followers. Now that we have thousands of followers, it is imperative that we target our content to activate them. By doing so, we can amplify our signal, allowing information to be dispersed to an even wider audience. During this quarter, we continued to utilize direct engagement tactics with elected officials and other stakeholders in the agriculture industry.

We recently started two new initiatives on Twitter to target content. Using the popular hashtags #TractorTuesday and #TBT [Throwback Thursday], we post external content about agriculture from publications, such as Modern Farmer, Smithsonian Magazine, and Popular Mechanics. Although this content is not specifically about the land-grant system, we recognize that it is still of interest to our audience and actually generates curiosity about our other LGU-focused content. Below is a screenshot of the first #TractorTuesday Facebook post along with its metrics. Our regular content on Facebook generates 1-5 engagements (clicks, comments, likes and shares) while this post generated 108. We are cross-posting all #TractorTuesday and #TBT content on Facebook and Twitter.



Engagement

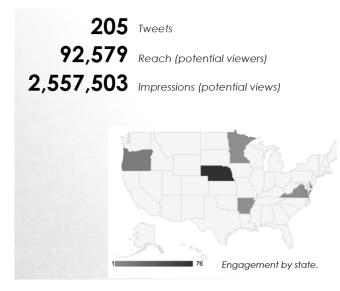
In addition to conversations with USDA-NIFA, we engaged in conversations with unaffiliated Twitter users who responded favorably to our news items. Although unaffiliated users usually do not have high social media influence scores, called Klout scores, this engagement represents a long-term strategy of creating informal dialogue that will increase brand awareness and

loyalty over time.

Overall, our key performance indicators have trended up month-over-month, including views, mentions, retweets, favorites, and click-throughs to the AgIsAmerica website.

Key Metric	Q4 2015	Q1 2016
Impressions	227,449	213,096
Engagements	2,006	2,102
Retweets	362	349
Link Clicks	415	471
Favorites	367	441

During the quarter, we continued to refine our Twitter Town Hall strategies and tactics. This quarter, we hosted a Twitter Town Hall with UNL-IANR. Our goal behind these Town Halls is to improve engagement tactics, utilize audience segmentation tactics, and implement our message testing findings. One tactic we refined was how we use Facebook and Twitter analytic tools to highly target our Town Hall advertising. We increased our advertising to leverage the fact that both Facebook and Twitter allow us to deliver ads to a very specific list of users, filtered by location, age, interest, and other demographic data.



UNL-IANR Twitter Town Hall

On March 4, AgIsAmerica and the University of Nebraska's Institute of Agriculture and Natural Resources (UNL-IANR) held an hour long Twitter Town Hall. We created significant buzz around the event and our hashtag - #AgIsChat. The topline metrics are on the left. A full report on the event can be found in Appendix E.

FACEBOOK

To date, the AgIsAmerica Facebook has amassed 12.5 thousand fans. While this platform itself has lost a share of general usage in comparison to other social media platforms, it remains the largest. Thus, having an active, popular, and growing Facebook is integral to cementing a successful brand.

Like Twitter, our strategies focused on user engagement and the application of our message testing findings. For example, toward the end of 2014 Q4, geotargeting posts became available on Facebook. Geotargeting posts allow us to pick where we would like Facebook users to view our post, and when appropriate, we used this tool as an audience segmentation and engagement tactic. Throughout the quarter, we honed in on topics that resonated with followers and thereby, would increase our organic reach. As discussed in the previous Twitter section of this report, we also launched new #TractorTuesday and #TBT [Throwback Thursday] campaigns on Facebook to drive audience engagement. As we continue to develop stronger relationships with universities and share content of interest to our audiences, we will continue to see a great deal of user-end engagement and amplification of our posts.

IV. MONTHLY NEWSLETTER

We re-implemented a regular newsletter strategy to meet three primary goals:

- Call attention to land-grant teaching, research, and Extension efforts;
- Highlight stories that resonate with our internal and external audiences;
- Tap into another audience network.

The newsletter is sent on behalf of AgIsAmerica via email through a program that allows us to analyze its metrics in real time. We share every newsletter on our digital media platforms.

This quarter, we shared nine newsletters, including one promotional newsletter for our Twitter Town Hall with UNL-IANR, with an average open rate of 30.6% and an average click rate of 14.6%.

We issued our January monthly newsletter on January 5 and garnered a 30.82% open rate and 17.4% click-through rate. To view this newsletter, please reference Appendix F.

We issued our February monthly newsletter on February 1 and garnered a 30.07% open rate and a 20% click-through rate; this was our highest click-through rate for the quarter. To view this newsletter, please reference Appendix G.

We issued a newsletter calling attention to an internal NIFA call about the next budget on February 9 and garnered a 33.33% open rate and 11.33% click rate; this was our highest open rate for the quarter. To view this newsletter, please reference Appendix H.

We issued a promotional newsletter following Drs. Irmak and Slack's visit to Capitol Hill and gamered a 31.19% open rate and a 7.09% click-through rate. To view this newsletter, please reference Appendix I.

We issued our March monthly newsletter on March 1 and garnered a 27.53% open rate and a 18.4% click-through rate. To view this newsletter, please reference Appendix J.

We issued a promotional newsletter about our Twitter Town Hall with UNL-IANR on March 4 and garnered a 25.1% open rate and a 5.26% click-through rate. To view this newsletter, please reference Appendix K.

To date, our newsletter list consists of 462 contacts. Of these contacts, 119 contacts subscribed organically through the AgIsAmerica website. However, we will execute an aggressive external marketing rollout strategy to test the right time and days to best reach our subscribers as well as to expand our subscription list to members of the media, industry experts, and Capitol Hill staff, among others.

To sign-up for our monthly newsletter, please email ashley.hawn@kglobal.com or elliot.carter@kglobal.com. You can also sign-up via our website - agisamerica.org.

V. EVENTS

We attended two events where we discussed the importance of AgIsAmerica, highlighted best branding and messaging practices, and shared AgIsAmerica updates with internal stakeholders, from communications specialists to department heads. Next quarter, we will continue to explore innovative ways to highlight AgIsAmerica's efforts and encourage internal engagement at these conferences and continue to attend various events that help us better connect with land-grant universities. Overall, our goal is to develop better working relationships with internal audiences in order to better highlight their research, teaching, and Extension efforts.

CARET/AHS 2016

In early March, Members of the AgIsAmerica team attended the 2016 CARET/AHS conference in Alexandria, Virginia. We participated in the Communications and Marketing Committee in-person meeting regarding the plan of work for 2016 and beyond. We also participated in the subcommittee discussion on message testing. In addition, we attended the joint ESCOP/ECOP session where we provided advice on messaging for competitive and capacity funding. As a result of our meetings, we were tasked with creating a list of funding-related hashtags.

Spring 2016 ECOP Meeting

In mid-March, the AgIsAmerica team attended the 2016 ECOP conference in Wilmington, Delaware. We spoke with ECOP members, liaisons, and guests about messaging the Extension system. We also discussed the importance of engaging with target audiences and advised attendees on best communications practices with target audiences.

VI. MISCELLANEOUS

UNL-IANR + OHIO STATE UNIVESRSITY WATER RESEARCHERS ON CAPITOL HILL



Suat Irmak, University of Nebraska and Steve Slack, The Ohio State University ECOP-ESCOP Align on Capitol Hill Event – Impacts of the Nebraska Agricultural Water Management Network

http://water.unl.edu/cropswater/nawmn drew significant interest at the NC-FAR Lunch and Learn series "More Crop for the Drop" earlier this month in Washington, DC. Co-hosted by ECOP and ESCOP, the seminar for U.S. Senate and House of Representative staffers and others was augmented by social media coverage (@agisamerica) on February 8th. Speakers were

Steve Slack, Ohio State University (retired), and Suat Irmak, University of Nebraska. For a recording of the presentation, go to

Suat Irmak, University of Neoraska. For a recording of the presentat http://www.ncfar.org/Hill_Seminar_Series_2016.asp.



Suat Irmak, University of Nebraska speaks to a crowd gathered on Capitol Hill

On Monday February 8, members of the AgIsAmerica team promoted a Lunch-N-Learn Session on Capitol Hill. Dr. Suat Irmak from the University of Nebraska-Lincoln and Dr. Steve Slack from Ohio State University led the presentation in front of congressional staff. The presentation reinforced our campaign's theme of water quality as the Drs. Irmak and Slack discussed the importance of water resource management as well as technology's role (i.e. micro-irrigation) in agriculture. To promote the event, members of the AgIsAmerica team interviewed Drs. Slack and Irmak prior to their presentation; live tweeted the event with photos; utilized the hashtag #cropperdrop; uploaded an album of the event to Facebook; issued a Q&A on the features section of our website; and distributed a newsletter about the event. We also cross promoted ECOP's Monday Minute and collaborated with Lunch-N-Learn cosponsor NCFAR.

FUNDING HASHTAGS

Working with Cornerstone, we created a list of a hashtags to denote funding sources and funding stream for land-grant research, teaching, and Extension. We vetted funding hashtags already in existence and created original hashtags. We then shared this list with university communications specialists via our newsletter listserv. We have begun to utilize these hashtags and will continue to add them to our social media copy in order to demonstrate how land-grant institutions use local, state, and federal funding.

To view the list of hashtags, please reference Appendix L.

NORTH CENTRAL COOPERATIVE EXTENSION ASSOCIATION

Last quarter, we worked with the North Central Cooperative Extension Association (NCCEA) to call attention to a recent study, prepared by research group Battelle, about Family Consumer Sciences. We helped create and share a variety of collateral from a press release to social media graphics. We shared this collateral on our website, social media platforms, with USDA-NIFA, and in our newsletter. As a result of our efforts, USDA-NIFA issued a blog post about the study, linking to the AgIsAmerica press release on Reuters' website. This year, NCCEA presented their study at USDA-NIFA and members from the AgIsAmerica team attended the presentation.

USDA-NIFA

We continued to work more closely with USDA-NIFA to better highlight the importance of NIFA funding and how it contributes to the land-grant story. We saw a tremendous spike in engagement during our March Twitter Town Hall with UNL-IANR. Next quarter, we will continue to coordinate with USDA-NIFA as well as explore ways to elevate our existing partnerships and develop new ones.

In 2015, we had a positive meeting with the communications team. One of goals is to work together to partner on opportunities, and share collateral and strategies. Specifically, kglobal will share our editorial calendar with the communications team, highlight USDA-NIFA's funding role in more stories, promote USDA-NIFA's hashtag #NIFAimpacts, and better showcase USDA-NIFA's efforts on our platforms, from spotlighting a USDA-NIFA blog post in our newsletter to engaging with USDA-NIFA on social media.

NATIONAL IMPACT DATABASE COMMITTEE

We continue to support the National Impact Database Committee and promote the Database. We have regular, bi-monthly check-in calls with the National Impact Database Committee and provide relevant feedback and updates. We continue to promote the Database by using the unique hashtag #LGUimpact we developed during the launch. Specifically, we connect this hashtag to any story we pull from the Database and repurpose on our platforms. That way, we continue to associate the hashtag with the Database beyond its launch. Last quarter, we helped the Committee write a fact sheet about these resources for deans and directors to encourage usage of the Database and its corresponding website.

VII. APPENDICES

Appendix A:

2016 MARCH ED CAL

Add a to-do

- Ø March 31:Research helps landowners reduce erosion, support ecosystem 2 comments (Completed by Elliot Carter on 28 Mar)
- March 30: Walking a Dog is Good for Your Health 2 comments (Completed by Elliot Carter on 28 Mar)
- March 29 National Nutrition Month: Nutritious meals are worth the time, money 2 comments (Completed by Elliot Carter on 28 Mar)
- March 28: UNH Research on Growing Spinach in Winter Going Strong 2 comments (Completed by Elliot Carter on 25 Mar)
- March 25: Penn State: Fruits, vegetables, 'farm-to-fork continuum' vital to cancer prevention 2 comments (Completed by Elliot Carter on 25 Mar)
- 🕑 March 24: Auburn/ Alabama A&M: Farmers Wait for Warmer Soil Temperatures 2 comments (Completed by Elliot Carter on 25 Mar)
- March 23: National Nutrition Month 2 comments (Completed by Elliot Carter on 23 Mar)
- March 16: Flood Safety Awareness Week 1 comment (Completed by Elliot Carter on 23 Mar)
- March 22: World Water Day 1 comment (Completed by Elliot Carter on 23 Mar)
- March 21: Invasive superweed Johnsongrass is the target of a new nationwide research effort 6 comments (Completed by Elliot Carter on 22 Mar)
- 🕑 March 21 UC and CDFA researchers make progress in fight against exotic brown marmorated stink bugs 3 comments (Completed by Elliot Carter on 21 Mar)
- March 14: UF: Find out what's ripe, when to plant with the Florida Fresh app 3 comments (Completed by Loren Long on 15 Mar)
- March 11: OSU: Why are my grapevines stunted? New OSU Extension app has the answers 3 comments (Completed by Loren Long on 15 Mar)
- March 15: UNL: Tool uses climate forecasts and crop modeling capabilities to transform data into value for farmers 4 comments (Completed by Loren Long on 15 Mar)
- March 12: World Kidney Day 3 comments (Completed by Joanne Jean on 14 Mar)
- 🕑 March 9: Auburn / Alabama A&M: Smart Snacks: Healthy Ways to Beat Hunger 2 comments (Completed by Loren Long on 10 Mar)
- March 10: Crowdfunding studies instrumental in securing five-year USDA grant 3 comments (Completed by Joanne Jean on 10 Mar)
- March 7: National School Breakfast Week 3 comments (Completed by Elliot Carter on 8 Mar)
- March 3: USDA: Agriculture Secretary Vilsack Announces \$18 Million Available to Support Research and Teaching at Historically Black Land-Grant Universities 10 comments (Completed by Elliot Carter on 2 Mar)
- March 2: UNL researchers identify target of disease-causing plant pathogens 3 comments (Completed by Elliot Carter on 26 Feb)
- March 1: UCANR: Research can help Californians live safely with wildlife 3 comments (Completed by Loren Long on 25 Feb)
- March 17: St. Patrick's Day 5 comments (Completed by Loren Long on 25 Feb)

Appendix B:

Thirteen Land-Grant Institutions Advance Fight Against Mycobacterial Diseases

Mycobacterial diseases cost livestock producers millions of dollars each year

January 27, 2016

WASHINGTON, DC- Thirteen land-grant institutions and partner organizations are working across state lines to develop and enhance tools needed to limit the spread of Johne's disease (JD) and bovine tuberculosis complex (TB) in livestock. JD and TB are two of the most widespread mycobacterial diseases in the US. JD alone costs the dairy industry in excess of \$200 million per year. In 2012, researchers formed the Multistate Research Project NE-1201to fill knowledge gaps, improve diagnostics and vaccines, and strengthen outreach programs for both diseases.

"Collaboration among our diverse team of researchers and partners helps ensure that livestock producers and veterinarians have access to accurate, up-to date information and research about JD and TB," said Gary A. Thompson, administrative advisor of NE-1201 and director of the Pennsylvania Agricultural Experiment Station.

JD and TB cause significant harm to the livestock industry through production losses and trade restrictions. Both infections are chronic, and symptoms occur only in advanced stages of disease, making it difficult to detect early. JD-infected cattle suffer from diarrhea, rapid weight loss, and decreased milk production while the symptoms of TB include lethargy, weakness and chronic respiratory issues. Before the development of pasteurization, TB could contaminate an animal's milk and pose a serious risk to human health.

NE-1201 is conducting critical research to help producers prevent future disease outbreaks and reduce economic losses. With a repository of over 10,000 bovine blood, milk and fecal samples, NE-1201 researchers contribute to the development of new tests and vaccines that will lessen the incidence and impact of TB and JD. NE-1201 has also established educational programs to help livestock veterinarians and producers take advantage of the latest advances.

NE-1201 is supported, in part, through USDA's National Institute of Food and Agriculture. The group also works with several federal partners, including USDA's Agricultural Research Services and USDA's Animal and Plant Health Inspection Service.

The participating land-grant institutions include:

- University of California, Davis
- Colorado State University
- Cornell University
- University of Georgia
- Michigan State University

- University of Minnesota
- University of Missouri
- University of Nebraska-Lincoln
- Pennsylvania Cooperative Extension
- Pennsylvania State University
- University of Tennessee
- University of Vermont
- University of Wisconsin

Visit <u>http://www.mycobacterialdiseases.org/home.html</u> to learn more about the initiative.

About Agriculture Is America (AgIsAmerica)

Agriculture is America. In short, the agriculture industry – sustained in large part by the American land-grant university system through Colleges of Agriculture, Agricultural Experiment Stations, and Cooperative Extension – is integral to jobs, national security, and health. To learn more, visithttp://agisamerica.org.

Appendix C:



AgIsAmerica and the University of Nebraska-Lincoln's Institute of Agriculture and Natural Resources to Host Twitter Town Hall

February 29, 2016

Extension specialists and researchers at The University of Nebraska-Lincoln's Institute of Agriculture and Natural Resources (UNL-IANR) will partner with Agriculture is America (AgIsAmerica), a national communications initiative aimed at highlighting the nation's land-grant institutions, to host a Twitter Town Hall on Friday, March 4th from 2 pm – 3 pm ET/ 1 pm – 2 pm CT.

Scientists, researchers, and Extension educators will answer questions regarding UNL-IANR's role in the advancement of agricultural science and agricultural technological innovation. Specifically, experts will discuss the role of unmanned aerial systems in agriculture, water management, and nutrient management; how technology can be used to track foodborne illnesses; how consumers can reduce food waste; and groundwater availability and quality. UNL-IANR, a land-grant institution, is dedicated to the three-fold mission of researching, teaching, and Extension as well as "growing a healthy future through food, fuel, water, landscapes and people."

A Twitter Town Hall, like a public meeting or seminar, gives the opportunity for a live question and answer period. To follow the conversation or submit a question, include the hashtag, "#agischat," in your tweet. All agriculture-related organizations, industry leaders, friends, and supporters are invited to join the discussion. The participating Twitter handles include: <u>@AgIsAmerica</u> and <u>@UNL_IANR</u>.

About UNL-IANR

The Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln focuses on people, and the food, water and natural resources that sustain them. IANR innovation in research, teaching and extension education places Nebraska on the leading edge of food production, environmental stewardship, human nutrition, business development and youth engagement. To learn more, visit <u>http://ianr.unl.edu/</u>.

About AgIsAmerica

In short, the agriculture industry – sustained in large part by the American land-grant university system through Colleges of Agriculture, Agricultural Experiment Stations, and Cooperative Extension – is integral to jobs, national security, and health. To learn more, visit <u>http://agisamerica.org</u>.

Appendix D:

Thirteen Land-Grant Universities Work Across State Lines to Improve Equine Farm Sustainability

March 31, 2016

WASHINGTON – Researchers from 13 land-grant universities examined equine operations and developed educational programs about horse and environmental stewardship. In the Northeast and Mid-Atlantic states alone, more than 428,000 horses, ponies, and mules are living on 65,000 farms, and each horse produces about 50 pounds of manure every day. Water runoff from manure, horse feed, and bedding can pollute nearby bodies of water. To devise sustainable, safe strategies for equine operations, these researchers formed the multi-state research project NE-1041 "Environmental Impacts of Equine Operations."

"Research on equine operations is an important component of environmental stewardship, especially here in the Northeast. Sustainable farm practices can increase safety for farmers, their horses, and neighboring communities and ecosystems. That's why we've been working together to develop alternatives to the most expensive challenges associated with horse farming, like waste removal," **said Mark Rieger**, **Dean of the University of Delaware's College of Agriculture and Natural Resources and administrative advisor for NE-1041**.

NE-1041 led the development of smarter feed strategies and pasture management. The group also led a successful outreach campaign to raise awareness of new sustainable farming methods. Researchers hosted informational meetings, educational exhibitions, and demonstration fields.

The group also leveraged articles, factsheets, and videos to share research findings. Over 1,000 horse owners were able to develop proper manure management and nutrient management plans through Rutgers and Pennsylvania State Universities' programs, and over 20 farms have had their pastures evaluated by specialists through a program with the University of Minnesota. NE-1041 is involved with at least 12 educational programs at various land-grant universities, including South Dakota State University's 4-H Horse Committee and the University of Vermont's Across the Fence television episodes.

The thoughtful management encouraged by this research, teaching and Extension has helped farmers avoid exposing fields and pastures to bacteria, chemicals, and parasites from the horses' stalls. In turn, improved waste and stall management has helped to improve soil, water, and air quality surrounding horse farms.

NE-1041 was supported in part through funding from the USDA's National Institute of Food and Agriculture (NIFA). The project has been renewed through 2019 as NE-1441. To learn more about NE-1041 or the ongoing efforts of NE-1441, please <u>click here.</u>

Land-grant universities participating in NE-1041 include:

- Auburn University
- University of Connecticut
- Louisiana State University
- University of Maryland
- University of Massachusetts
- Michigan State University
- University of Minnesota
- North Carolina State University
- Pennsylvania State University
- Rutgers University
- South Dakota State University
- University of Vermont
- Virginia Polytechnic Institute and State University
- •

About Agriculture is America

Agriculture is America. In short, the agriculture industry – sustained in large part by the American land-grant university system through both Agricultural Experiment Stations and Cooperative Extension – is integral to jobs, national security, and health. To learn more, visit http://agisamerica.org.

Appendix E:

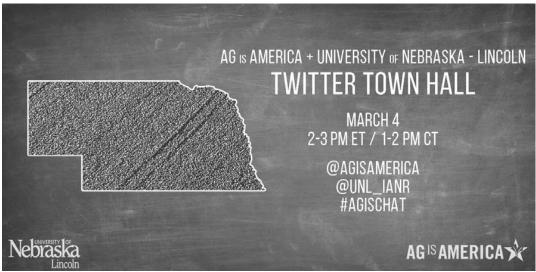
University of Nebraska Lincoln – IANR Twitter Town Hall Analytics Report

March 4, 2016

Overview

The goal of this Twitter Town Hall was to highlight the University of Nebraska-Lincoln's Institute of Agriculture and Natural Resources and how it advances agricultural science through research, teaching, Extension, and technological innovation. The event focused on four key topics:

- Unmanned aerial systems in agriculture
- Technology's role in tracking food-borne illnesses
- Reducing food waste
- Groundwater availability & quality



(Promotional graphic for the Twitter Town Hall)

Promotion

We leveraged several platforms and various forms of media to encourage engagement in the Town Hall.

On March 1st, we referenced the Town Hall in our monthly newsletter "Why Ag Matters." We also included our promotional graphic and a description of our featured story - a Q&A with UNL's Alice Henneman, who served as an expert on our Town Hall panel. The featured story was titled "Meet the Dietitian and Extension Educator: Alice Henneman" and discussed the importance of reducing food waste as well as the critical role Cooperative Extension plays in this effort. On Monday, February 29th, AgIsAmerica issued a press release advertising and promoting the Town Hall that generated 172 media hits with a collective 88.5 million impressions. Impressions are calculated based on a publication's circulation numbers and a website's online traffic.

UNL-IANR also issued a press release on the same day, reiterating the same messaging as AgIsAmerica. UNL-IANR's press release was also included in IANR's newsletter. Our joint press release strategy resulted in an interview with Haley Steinkuhler on Nebraska's KRVN radio station.

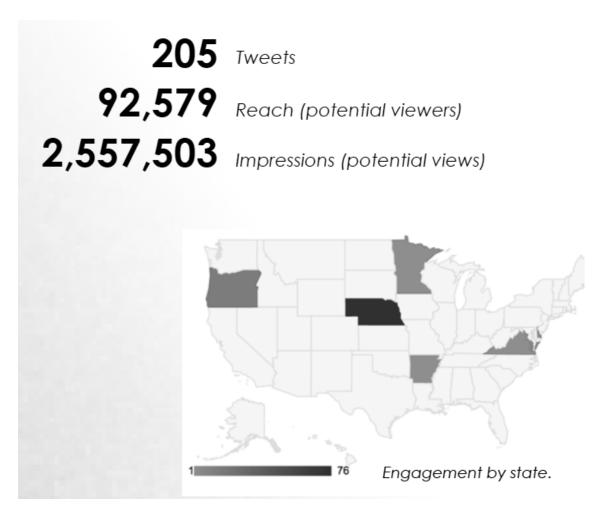
During the week of the Town Hall, AgIsAmerica collaborated with UNL-IANR to create a comprehensive list of state and national stakeholders. Our list included 43 contacts, ranging from a Washington reporter for Politico to the Nebraska Department of Agriculture. In addition, AgIsAmerica reached out to personal contacts at APLU and USDA-NIFA. In the days prior to the Town Hall, we emailed and tweeted at the stakeholders, notifying them of the event. During the Town Hall, we issued invitations via direct messages and tweeted at the stakeholders again.

At the onset of our Town Hall, we issued an additional call to action and invitation of engagement through AgIsAmerica's newsletter list. The promotional newsletter "Happening Now: Twitter Town Hall" resulted in a 24% open rate and 5% click-through rate. It was issued to 455 contacts.

Over the course of the week of the 29th, we promoted the Town Hall on social media with ad buys targeted at key audiences in Nebraska and Washington, DC. The ads leveraged the promotional graphic, which both UNL-IANR and AgIsAmerica shared on their Twitter accounts prior to the event.

Our Results

We created significant buzz around the event and our hashtag - #AgIsChat. The topline metrics from the event are below.



Key Takeaways

As our metrics above indicate, we believe this event was a huge success. On the one hand, we continued to demonstrate that AgIsAmerica is an active, engaged brand and has embraced Twitter as an important vehicle for connecting with followers. Likewise, we believe the event helped to bolster UNL-IANR's presence on Twitter as well as continued to establish expertise in the key topic areas, particularly unmanned aerial systems. We noted several UAS stakeholders engaging in the Town Hall by answering questions and generating new conversations. Overall, UAS, food waste, and nutrition were the topics that resonated most with the audience during this event.

Appendix F: Why Ag Matters

Your monthly snapshot of the extraordinary work from our land-grant universities, institutions, and Colleges of Agriculture compiled by Agriculture is America.

Multistate Research Project Conducts Critical Wetland Soil Research

Soil scientists from 10 land-grant institutions are working across state lines to improve soil identification and soil resource management through extensive research on soil hydrology – the movement, distribution, and quality of water among soils. The data collected by <u>Multistate Research Project NE-1038 Hydromorphic Soils</u> (NE-1038) has been used widely by federal, state, and local stakeholders.

Here's what Jon Wraith, Administrative Advisor for the project, Dean of the University of New Hampshire College of Life Sciences and Agriculture, and Director of the New Hampshire Agricultural Experiment Station said:

"Comprehensive data about wetlands soils, from their physical composition to their chemical characteristics, is crucial for wetlands management and restoration, environmental stewardship, and responsible infrastructure planning."

"At work sites across the Northeast and Mid-Atlantic, NE-1038 researchers investigated the impacts of human practices like aquaculture and fracking on wetland soil hydrology and how soil conditions affect the amount of carbon that can be stored by wetlands. This work, in particular, helps us assess the impacts of global warming on coastal communities."

Read more about NE-1038 here.



Meet Extension Educators Deb Gebeke (NDSU) and Paula Peters (KSU)

AgIsAmerica sat down with Family and Consumer Sciences program leaders Deb Gebeke from North Dakota State University and Paula Peters from Kansas State University to learn more about Cooperative Extension and the impact of Family Consumer Sciences (FCS). Read more <u>here.</u>

USDA NIFA also issued a blog post about FCS and the North Central Cooperative Extension Association's study prepared by the research organization Battelle. Read USDA NIFA's blog post <u>here.</u>

Meet the Southern University Agricultural Research and Extension Center



Ag is America @agisamerica · Dec 16 Our most recent Q&A explores Extension FCS w/ experts from @NDSUExt and @KStateResExt: bit.ly/1Yiy85D.

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AgIsAmerica sat down with De'Shoin York, Dr. Fatemeh Malekian, and Stephanie Elwood from the Southern University Agricultural Research and Extension Center in anticipation of our December 3 Twitter Town Hall.

We discussed all of the great things they do for Louisiana with research and specific programs like Youth Cooking Camps and the Fast Track Gardening Program for incarcerated youth. Read more here.

Highlights in Research, Teaching, and Extension

- Delaware State University Awarded Almost \$900,000 in USDA Grants
- Agriculture Projects Help Auburn Earn National Innovation Award
- Multistate Project Manages Invasive Weeds in Wheat
- UC Berkeley to Lead \$12.3M Study of Drought Tolerant Crops

Top Tweets



Ag is America @agisamerica · Nov 17 Growing food can be cheaper and healthier than going to the store according to @UKExtension: bit.ly/10zS8k5



3 Ag is America Retweeted USDA





Ag is America @agisamerica · Dec 24 Ag is America eagisamerica eagi your Poinsettias are dropping leaves: bit.ly/1PbKoUR #coopext



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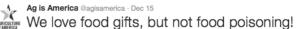
Ag is America @agisamerica · Dec 15 Researchers at @UCDavis received a grant from @USDA_NIFA to study lettuce #NIFAImpacts: bit.ly/1PMAIGO

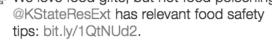
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Fun Fact

Did you know that January is National Soup Month? AgIsAmerica will be sharing some of our favo recipes. Here's a preview – a Tomato Soup recipe from Oregon State University Extension Service. your favorite soup recipe by tweeting @AgIsAmerica!

This is a monthly email highlighting some of the content featured on Ag Is America. Our goal is to the land-grant story with you.

What has your local land-grant university or institution done to impact jobs, the economy, nation security,

water security, health or nutrition research and education?

We'd love to hear from you. We're particularly interested in updates from the Colleges of Agriculti research accomplishments, and extension efforts. Send your ideas and questions to@AgIsAmerica the hashtag #LGUimpact.

We also invite you to help communicate the value of land-grant institutions by:

- Sharing this newsletter
- Following <u>AgIsAmerica on Twitter</u> and encouraging others to do the same
- Retweeting content from @AgIsAmerica
- Mentioning us in your own tweets and linking to stories on agisamerica.org

Appendix G

February 2016: Why Ag Matters (AgIsAmerica's Monthly Newsletter)

Your monthly snapshot of the extraordinary work from our land-grant universities, institutions, and Colleges of Agriculture compiled by Agriculture is America.

Thirteen Land-Grant Institutions Advance Fight Against Mycobacterial Diseases

Thirteen land-grant institutions and partner organizations are working across state lines to develop and enhance tools needed to limit the spread of Johne's disease (JD) and bovine tuberculosis complex (TB) in livestock. JD and TB are two of the most widespread mycobacterial diseases in the US. JD alone costs the dairy industry in excess of \$200 million per year. In 2012, researchers formed the Multistate Research Project NE-1201to fill knowledge gaps, improve diagnostics and vaccines, and strengthen outreach programs for both diseases.

Here's what **Dr. Gary A. Thompson, administrative advisor of NE-1201 and director of the Pennsylvania Agricultural Experiment Station** said about the project: "Collaboration among our diverse team of researchers and partners helps ensure that livestock producers and veterinarians have access to accurate, up-to date information and research about JD and TB."

NE-1201 is supported, in part, through USDA's National Institute of Food and Agriculture. The group also works with several federal partners, including USDA's Agricultural Research Services and USDA's Animal and Plant Health Inspection Service.

To learn more about mycobacterial diseases, please click <u>here.</u>

To read the press release in full, please click here.

Highlights in Research, Teaching, and Extension

- <u>Mississippi State University: Set Healthy Work Life Balance</u>
- <u>University of Nebraska-Lincoln: January is National Egg Month</u>
- UC Berkeley: Berkeley to Lead \$12.3M Study of Crop Drought Tolerance
- <u>Clemson University: Clemson University Documents Impact of Drougth,</u> <u>Historic Flood on Farmers</u>

Top Tweets



Rich Collins grew a thriving Endive farm w/ education he r'cvd at @ucdavisCAES! #LGUimpact bit.ly/1njBOsb



Ag is America @agisamerica · Jan 19 X Orange you glad @floridastate/@UF_IFAS are working to end citrus greening with @USDA grant? bit.ly/1S1QNTg



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Top AgIsAmerica Tweets

Ag is America Cagisamerica · Jan 25 Check out @ModFarm's guide to root veggies to learn more about these underrated veggies. bit.ly/1kPO168



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Fun Fact

Did you know that almonds have more calcium than any other nut? In honor of National Almond Day on February 16th, here are six facts you might not know about almonds from The Huffington Post.

This is a monthly email highlighting some of the content featured on Ag Is America. Our goal is to share the land-grant story with you.

What has your local land-grant university or institution done to impact jobs, the economy, national security, water security, health or nutrition research and education?

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- Mentioning us in your own tweets and linking to stories on <u>agisamerica.org</u>

Appendix H:

February 2016: Overview of FY2017 NIFA Budget

Happening Today: Overview of FY2017 NIFA Budget

At 6 p.m. EST, Dr. Sonny Ramaswamy, director of USDA's National Institute of Food and Agriculture (NIFA), will provide an overview President Obama's proposed FY17 NIFA Budget.

Per last week's announcement, the President's budget will invest \$700 million for AFRI. For a statement and blog by Sonny Ramaswamy on the AFRI budget request and a fact sheet, please visit <u>www.nifa.usda.gov/afri.</u>

Please share this invitation from USDA NIFA with your colleagues, but note that this call is closed to the press.

To tune in, please follow the participant instructions.

- The conference begins at 6 PM Eastern Time on Feb. 9, 2016: You may join the conference 5 minutes prior.
- Dial-in: 1-877-369-5243 or 1-617-668-3633
- Access Code: 0690029#
- For assistance, call the Help Desk at 1-888-796-6118 or 1-847-562-7015.
- For more information, contact Bill Hoffman, at (202) 401-1112.

Appendix I

Meet the Water Productivity Researchers and Extension Educators, Drs. Steve Slack and Suat Irmak

On Monday, AgIsAmerica sat down with Drs. Slack and Irmak before their presentation on Capitol Hill. The presentation, *More Crop Per Drop: Technology Implementation in Agriculture for Enhancing Crop Water Productivity*, explored water productivity, quality, and quantity issues. Drs. Slack and Irmak were invited to speak to congressional staff as a part of a Lunch-N-Learn series. To listen to the presentation in full, please click <u>here</u>.

1. Welcome to Washington! Tell us about yourselves.

Dr. Irmak: I'm a faculty member in the Biological Systems Engineering Department at UNL (University of Nebraska-Lincoln) under the Institute of Agriculture and Natural Resources. My research and Extension education programs focus on soil and water resources engineering, irrigation engineering, crop production. On my research team, I work with a large group of people, and we have numerous large scale projects every year. We work very hard to transfer all of the knowledge, data and information to help agricultural producers and other professionals make better, more informed decisions.

I'm Turkish-American. I received my undergraduate and MS degrees in Turkey and received my Ph.D. degree from the Agricultural and Biological Engineering Department at the University of Florida in 2002, and then moved to UNL as a faculty member.



Dr. Slack: I've spent 40 years in agricultural research, and for the last 16 years, I've been the Experiment Station Director and Director of Research at The Ohio State University. Prior to that, I did undergraduate and graduate work at The University of Arkansas and did my PhD at The University of California, Davis. I also spent time at The University of Wisconsin-Madison and Cornell University – all land-grant universities. My specialty, in terms of training, is plant pathology, or the study of plant diseases.

At Ohio State, my primary area of responsibility was research, but I worked very closely with the Extension Director. We jointly would fund faculty positions that had a combination of research and Extension responsibilities, and the importance of that from our perspective is that it allowed us to jointly focus on those issues that were important to the State of Ohio and surrounding states.

2. What are the top water challenges we face here in the US?

Dr. Irmak: In Nebraska, and many other states, one of the biggest issues is water. Nebraska is blessed to have a great aquifer, but that isn't the case in every part of the state. There are certain places where water is extremely limited. In certain districts, producers can only pump a certain amount of water, so as research and Extension professionals, we try to help them on implementing strategies as to how to best manage the resources. Water is always an issue.

Dr. Slack: Water is a major issue in Ohio, but it's a different issue than what you'd find in Nebraska or the states west of the Mississippi. Our issues with water tend to be water quality issues – really looking at the nutrients in water and their impact as well as trying to devise plant management practices that affect water quality.

Dr. Irmak: On a larger scale, I think one of the biggest issues is how to best utilize resources as efficiently as possible while maintaining high yield with minimal input and optimal, or maximum, output. So, efficiency is always an issue. How do you optimize that? What kinds of technology and educational tools do you need? How do you implement them in production fields on large scales?

Dr. Slack: I agree, efficiency – whether you're talking about quantity or quality of water – is an important issue, but I also think, superimposed on that, is all of the climate variables that we see. Currently, a lot of the water events that we have are pretty extreme, and trying to deal with them and that climate difference, which is accented by El Nino this year, really makes these issues of efficiency and management even more crucial.

3. What are the top water challenges we face globally?

Dr. Irmak: In many cases, the challenges we face in the US are similar to the challenges we face globally, but there are some differences too. The challenges may be similar, but tools, educational opportunities, technology, and other resources available to deal with those issues can be very different. I've been to a lot of different places where this is the case. You know, land-grant university model, we may take it for granted, but it is an ingenious idea/model, and not many countries have a land-grant system. There have been discussions in different platforms about how we can transfer this model to other countries, like Brazil for example. The land-grant mission or model creates excellent opportunities and tools to deal with those global issues. And, agricultural engineering profession plays a vital role in this process.

Dr. Slack: One of the critical things that we face both nationally and internationally is the rapidly growing population and the need for food production, the need for water management, the need for efficiency in the use of energy. All of these things impact each other, and again, the clear advantage of our land-grant universities is that we have an opportunity on that mix of issues to work together with other colleagues for solutions. Resource management is not an issue of agriculture versus cities versus some other sector of society; this is really an issue that affects all of us.

As we look at the changes in climate, we're going to face new water challenges, and we're going to have to look at how we manage water both internally and amongst other countries. And doing that, while trying to feed a population growing worldwide, is going to be a challenge.

4. How can technology enhance crop water productivity and management?

Dr. Irmak: There's a significant interconnection between climate, water management, water quantity, water quality, and crop production. These are linked in a way that you cannot just separate one variable from the rest of the group. In water quality and quantity, for example, when introducing technology into production fields, you try to optimize or better manage irrigation applications. Technology can have many different forms from implementation to sensors, but technology can help us make better, more informed decisions. Technology can also minimize the human error associated with decision-making; we know exactly how much water to apply and when. Proper irrigation management can reduce the potential for nutrient and other chemical leaching to the surface and groundwater resources.

5. What is irrigation, and what are its benefits and challenges?

Dr. Irmak: In the simplest terms, irrigation can be defined as supplementing water to crops in the absence of precipitation to meet crop water requirements to grow an optimal yield.

Dr. Slack: With the proper use of irrigation technology, you can put water where it's needed and do that in an efficient manner.

Dr. Irmak: There are other several important benefits to irrigation; it provides stable productivity levels under changing climatic conditions. For example, one year, you may have good precipitation; the next year, you may not. Irrigation enables us to not only apply water in the right places at the right time with the right amount, but also enables us to do chemigation and fertigation, both of which distribute nutrients and other water soluble products throughout growing season rather than applying most or all of the nutrients in the beginning of the growing season, which enhances nutrient application ad uptake efficiency.

However, there are many challenges with irrigation. Improper irrigation management can result in nutrient leaching to other water sources. Over irrigation can reduce crop yields substantially due to an improper balance of nutrients, and the lack of water can also negatively impact crop yields.

Dr. Slack: I think it's also important to realize that not only does technology change over time but crop management also changes over time. So, the issues you deal with – they might be nutrient issues – but how you manage them will change with the technology.

6. How is land-grant research and Extension funded?

Dr. Slack: This goes back to how our land-grant universities operate. We have a mix of funding that we would call capacity and competitive funding. The capacity funds put scientists on the ground in states and local arenas, so we can identify and prioritize those local and state issues. At the same time, we have competitive funding that allows us to identify and prioritize national issues. That mix from bottom-up, top-down allows us to really make sure that we're addressing those issues that continue to impact our agriculture.

Appendix J:

March 2016: Why Ag Matters (AgIsAmerica's Monthly Newsletter)

Your monthly snapshot of the extraordinary work from our land-grant universities, institutions, and Colleges of Agriculture compiled by Agriculture is America.

Next Twitter Town Hall to Highlight Precision Agriculture, Food Waste, Foodborne Illnesses, and Groundwater.

On Friday, AgIsAmerica is hosting a Twitter town hall with the University of Nebraska-Lincoln (UNL). Research and Extension experts from UNL's Institute of Agriculture and Natural Resources (UNL-IANR) will be on hand to answer your questions about all things agricultural research, teaching, and Extension, especially

precision agriculture, food waste, foodborne illnesses, and groundwater.

The town hall will take place 1- 2 pm CT / 2-3pm ET. Submit your questions using the hashtag #AgIsChat to <u>AgIsAmerica</u> or <u>UNL-IANR</u> now. Hope you will engage with us! To read more about the Twitter Town Hall, please click <u>here.</u>



To listen to **UNL-IANR Media Specialist Haley Steinkuhler** discuss our upcoming Twitter Town Hall on a local radio show in Nebraska, please click <u>here.</u>

Meet the Dietitian and Extension Educator: Alice Henneman

AgIsAmerica sat down with Alice Henneman, dietitian and Extension Educator with the University of Nebraska-Lincoln (UNL) to learn more about food waste, nutrition, and Cooperative Extension.

Alice coordinates and contributes to the <u>food.unl.edu</u> website, which receives over 2.5 million page views. The website covers topics of interest to consumers related to food, nutrition and food safety. This coming year, a new topic – how to help prevent food waste during the planning, preparation and storage of food – will be a new focus on the website.



Follow our Twitter Town Hall with UNL on March 4th to ask Alice more questions! The hashtag is #agischat, and you can submit a question to <u>AgIsAmerica</u> now.

To read the Q&A in full, please click <u>here</u>.

Highlights in Research, Teaching, and Extension

- USDA: Shiitake Mushrooms: A Commercial Forest Farming Enterprise
- <u>UMES: Faculty Receive \$1.2M in Grants</u>
- National Almond Day: UNL: 5 Ways to Make a Healthier Trail Mix
- WSU: New White Wine Irrigation Techniques

Top Facebook Post



Did you know that many cool weather vegetables, like broccoli, kale, and cabbages, are known to fight cancer and heart disease? Check out these tips from The Ohio State University on how to make the most of health benefits from cruciferous vegetables. bit.ly/1Q5Eqka



A Share

Dawn Mellion-Patin, Sandy Lovfald and 2 others like this.

6 shares

Top Tweets



★ 13 ¥ 10 ····

AGRICULTU

Ag is America @agisamerica · Feb 2

#DidYouKnow CA produces 99% of walnuts in US? See how @UCdavisCAES is helping industry: bit.ly/1nDYS59



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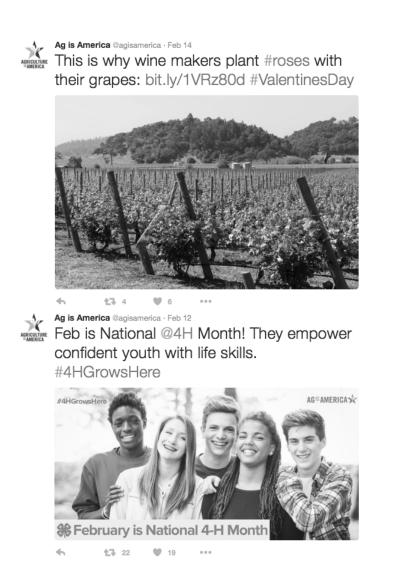
Top AgIsAmerica Tweets



Ag is America @agisamerica Feb 16 .@USDA_NIFA giving \$15M for plant health research. #NIFAImpact #ShareYourScience 1.usa.gov/1nHXePP



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Fun Fact

Did you know that **about 40%** of the US food supply is wasted? AgIsAmerica asked Dietitian and Extension Educator with the University of Nebraska-Lincoln, Alice Henneman, all about food waste, nutrition and Extension. Be on the look out for our next Q&A, but in the meantime, take a look at Alice's article, "<u>14 Ways Consumers</u> <u>Can Reduce Food Waste</u>."

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Appendix J:

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February 29, 2016



Extension specialists and researchers at The University of Nebraska-Lincoln's Institute of Agriculture and Natural Resources (UNL-IANR) will partner with Agriculture is America (AgIsAmerica), a national communications initiative aimed at highlighting the nation's land-grant institutions, to host a Twitter Town Hall on Friday, March 4th from 2 pm – 3 pm ET/ 1 pm – 2 pm CT.

Scientists, researchers, and Extension educators will answer questions regarding UNL-IANR's role in the advancement of agricultural science and agricultural technological innovation. Specifically, experts will discuss the role of unmanned aerial systems in agriculture, water management, and nutrient management; how technology can be used to track foodborne illnesses; how consumers can reduce food waste; and groundwater availability and quality. UNL-IANR, a land-grant institution, is dedicated to the three-fold mission of researching, teaching, and Extension as well as "growing a healthy future through food, fuel, water, landscapes and people."

A Twitter Town Hall, like a public meeting or seminar, gives the opportunity for a live question and answer period. To follow the conversation or submit a question, include the hashtag, "#agischat," in your tweet. All agriculture-related organizations, industry leaders, friends, and supporters are invited to join the discussion. The participating Twitter handles include: <u>@agisamerica</u> and <u>@UNL_IANR</u>.

About UNL-IANR

The Institute of Agriculture and Natural Resources at the University of Nebraska-Lincoln focuses on people, and the food, water and natural resources that sustain them. IANR innovation in research, teaching and extension education places Nebraska on the leading edge of food production, environmental stewardship, human nutrition, business development and youth engagement. To learn more, visit <u>http://ianr.unl.edu/</u>

About AgIsAmerica

In short, the agriculture industry – sustained in large part by the American land-grant university system through Colleges of Agriculture, Agricultural Experiment Stations, and Cooperative Extension – is integral to jobs, national security, and health. To learn more, visit <u>http://agisamerica.org</u>

Appendix L:

List of Federal Funding Hashtags

- Hatch Act: #HatchAct1887
- Smith-Lever: #SmithLever
- Evans-Allen: #EvansAllen
- AFRI: #AFRI
- McIntire Stennis: #McIntireStennis
- 1890's Extension: #1890LandGrant