

IANR
January 2021
All-Hands

Mike Boehm
NU Vice President
IANR Harlan Vice Chancellor



28 JAN 2021

IN OUR GRIT, OUR GLORY™









Friends and potlucks

Group's 'fort' provides place to be together. **KUBICK, A3**



Speed it up

Ricketts says 'get us more vaccines.' **LOCAL, A3**



CLOUDY 20 • 10 FORECAST, B10 | **TUESDAY, JANUARY 26, 2021** | journalstar.com

'BIG ONE' ARRIVES



KENNETH FERRIERA, JOURNAL STAR

Workers try their best to keep snow from piling up during a winter storm in downtown Lincoln on Monday.

City sees one of its heaviest snowfalls

Parking ban has new rules

Odd-numbered year means no parking on odd-side of street

RILEY JOHNSON
Lincoln Journal Star

The city has thrown out the old snowstorm parking dance that required residents to shuffle their cars from one side of the street to the other to keep up with the residential parking ban.

Instead, a new change limits the parking ban to one side of the street.

For 2021 and other years ending in an odd number, parking

on the odd-numbered side of the street is prohibited while crews work. Monday's snowstorm marked the first time the city implemented a residential parking ban under the new rules.

"What we're hoping for with this change is to make parking bans more easily understood," said Tim Byrne, who oversees winter storm operations for Lincoln Transportation and Utilities.

The residential parking ban is separate from the snow emergency designation that bans parking on both sides of all

Please see **PARKING**, Page A2

AgLines: UNL's ag research facility to receive federal funding



LINCOLN — The USDA Agriculture Research at the University of Nebraska-Lincoln will receive \$11.2 million in federal funding for the planning and design of its facility.

The funding is included in the federal 2021 omnibus appropriations bill. Rep. Jeff Fortenberry, ranking member of the House Appropriations Subcommittee on Agriculture, was successful in including the funding.

Fortenberry said he is pleased that a new USDA building for ARS is slated for the Nebraska Innovation Campus at UNL.

“With this new funding, USDA will expand its strategic research investments in areas such as agricultural innovation and precision agriculture,” Fortenberry said. “This effort aligns the needs of our country and the university’s agricultural research mission.”

Combating weapons of mass destruction? UNL flexes ag research prowess to national agency

Chris Dunker Dec 28, 2020 Updated Jan 18, 2021

If — and that's an extremely hypothetical if — David Richardson were to attack the country he serves as an assistant secretary in the Department of Homeland Security, his plan wouldn't be flashy.

"I would do it in the most unsexy way possible," said Richardson, by attacking the nation's food supply.

Exposing the hog population to a deadly pathogen, for example, would dry up pork supplies in grocery stores within days, and compromise the rest of the animals in the pipeline, the former U.S. Marine officer said, hamstringing the economy in the process.



Quick Hits and Updates...

- IANR hits record numbers on the federal grant and research expenditure fronts – for calendar year 2019.
- *'The 2017 Economic Impact of the Nebraska Agricultural Production Complex'*
- Center for Resilience in Working Agricultural Landscapes(CRAWL) and the *Center for Agricultural Profitability (CAP)* established.
- ~\$22M in targeted appropriations included in Farm Bill – including \$1.3M for National Drought Mitigation Center (NDMC), \$4M for Farm of the Future, Genome to Phenome, and \$11.2M for new USDA ARS building at the NIC.
- Frank and Mabel Leu Memorial Ranch gifted to NU NCTA / IANR – Hays Co. ~2,000 acres.
- The Dinsale Family Learning Commons (formally the CYT) and the new student collaborative space in the old Food Processing Center opened yesterday. Gnotobiotic Mouse Facility completed in OCT 2020.



Quick Hits and Updates...

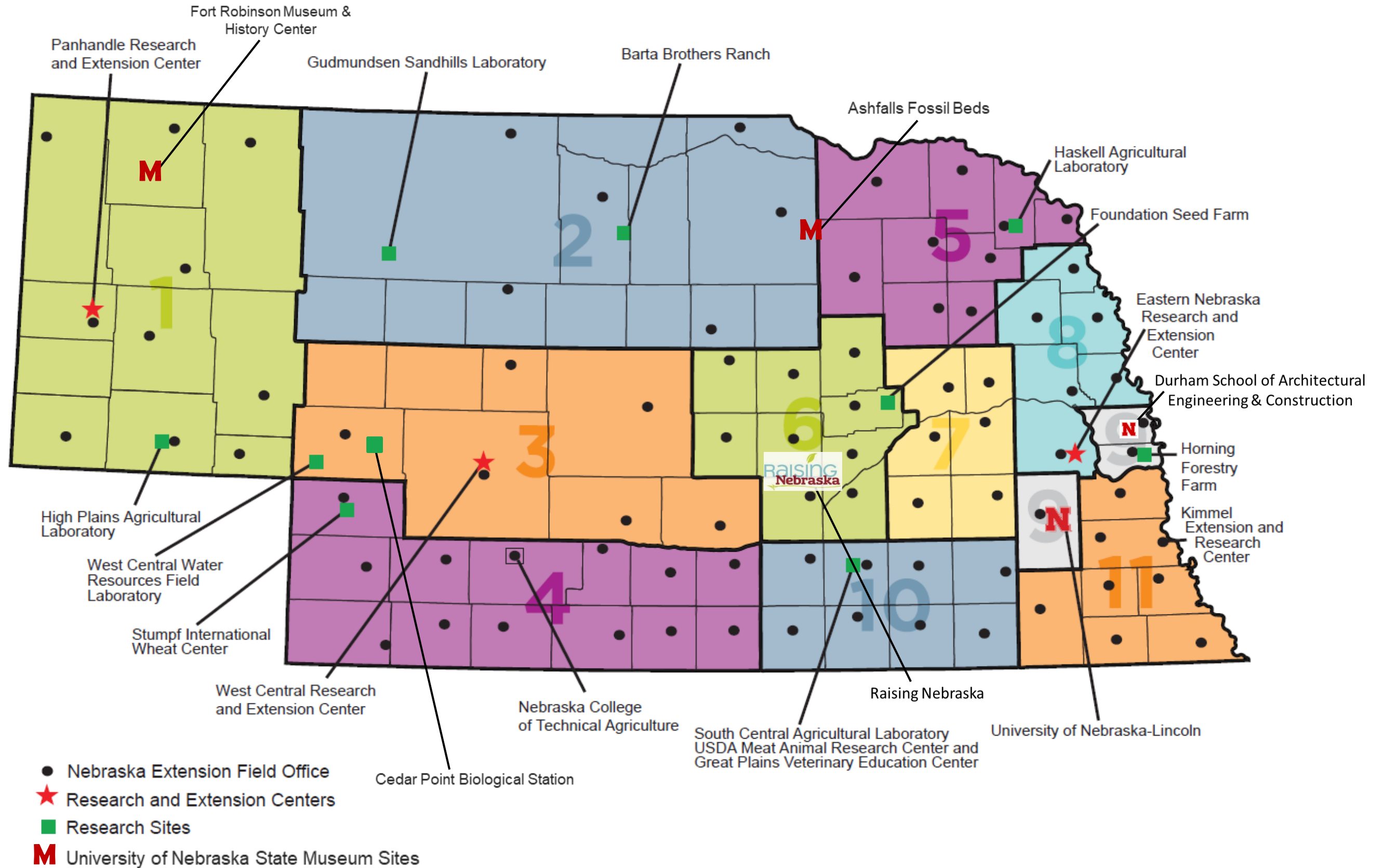
- Mission critical faculty lines now moving towards approval – the hiring freeze is thawing.
- Update to [*An Atlas of the Sand Hills*](#) commissioned – targeted release 2023 – IANR's 50th Anniversary.
- Searches will be launching soon for:
 - Dean/Director, Nebraska Extension
 - Director, Panhandle Research, Extension, and Education Center
 - Director and Extension Program Leader (two positions) for Rural Prosperity Nebraska
 - Director, Great Plains Veterinary Education Center (GPVEC)
 - Director, Center for Grasslands Studies
- Feed Yard Innovation Center and SmartFarms East/West advancing.
- External team conducted review of IANR's network of Greater Nebraska locations and our Research, Extension, and Education Centers – post-review processing.





UNL's Expanded Campus

All Sites and Engagement Zones



Welcome New Faculty and leaders Since September All Hands Meeting



Jesse Fulton



Carla McCullough



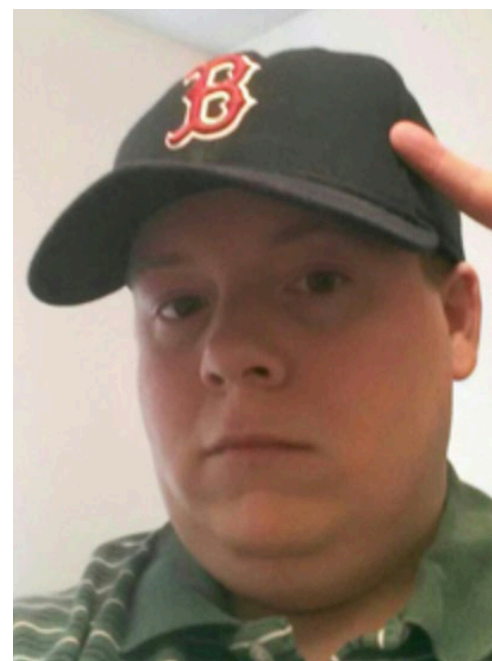
Sarah Sonsthagen



Jonathan Spurgeon



Rebecca Swanson



George Limpert



Paul Velader



Oleh Khalimonchuk
Redox Biology Center



Retirements Since September All Hands Meeting

Deanna Aguilar
Thomas Aspinall
Tracy Behnken
Lainey Bomberger
Judy Carter
Gary Cyriacks
Keith Glewen
Rick Haave
Charlene Jochum
Thomas Jochum
Clayton Kelling

Janis Kingham
Gary Lang
Amy Metzger
Kurt Nisley
William Noel
Clyde Ogg
Debra Pederson
Lonny Petersen
Rosanne Samuelson
Gina Schilke
Dale Schmidt Jr.

Lisa Silberman
Melissa Spangler
Stephen Spomer
Douglas Stephen
Julie Thomson
David Torquati
Rodney Valentine
Joe Walker
Douglas Winkler
Wanda Wood

Congratulations and Thank you!



ARD Junior Faculty for Excellence in Research Award

2020 Awardees

2015

- Samodha Fernando
- Patricio Grassini
- Amanda Ramer-Tait

2016

- Oleh Khalimonchuk
- James Schnable
- Dirac Twidwell

2017

- Dipti Dev
- Hiep Vu

2018

- Ozan Ciftci
- Yufeng Ge

2019

- Rebecca Roston
- Sam Wortman



Taro Mieno
Agricultural Economics



Toshihiro Obata
Biochemistry
Plant Science Innovation











EXPLORE GLOBAL LEARNING OPPORTUNITIES



[Nebraska](#) › [IANR](#) › [CASNR](#) › [Academic Programs](#) › [Global Opportunities](#) › Global Learning Hub

Global Learning Hub

Through the Global Learning Hub, in-person and online learners can explore global learning opportunities in Nebraska and beyond. The Hub is a learning platform with both physical and virtual components that highlights the expanse of international programming, activities and engagement within the Institute of Agriculture and Natural Resources (IANR). Students, faculty and staff can further expand their global network by utilizing it as a resource that will work to facilitate international teaching and learning, connections with scholars from around the globe, and campus/community engagement and programming to enhance the global mindset of the next generation of leaders. The Hub will also facilitate an increased sense of belonging and wellness for both domestic and international students as well as a platform for our global community of learners to interact with and learn from each other.

Services

- Inspire global curiosity
- Connect students, faculty, and staff to global opportunities
- Support international students
- Promote and advise students on global learning opportunities
- Build international community
- Provide global learning programming and resources



Seminar Series

- ▶ [Session I - Academic Success & Best Practices](#)
- ▶ [Session II - Strategies to Engage Virtually with your CASNR and UNL Community](#)
- ▶ [Session III - Health and Wellbeing](#)

UPCOMING EVENTS

FEB 2
9:00 AM
Virtual
Global Coffee Talks

APR 7
6:00 PM
Virtual
Health and Wellbeing

FEB 3
6:00 PM
Virtual
Academic Success & Best Practices

MAR 3
6:00 PM
Virtual
Strategies to Engage Virtually with your CASNR and UNL Community



[Office of Academic Success and Intercultural Services](#)



[Yeutter Institute of International Trade and Finance](#)



[International Student and Scholar Office](#)



[National Fellowships](#)

CASNR Education Abroad

Find overseas international opportunities

IANR Global Engagement

Connect with internationally focused faculty and staff

Global Opportunities

Discover avenues to global education and careers

[EMAIL US](#)

#ThisIsCASNR

IANR Science Communication Hub

[Home](#)

[Resources](#)

[Events and Workshops](#)

Welcome

The IANR Science Communication Hub is dedicated to supporting IANR students, postdocs, and faculty to reach their scientific writing and science communication goals. The hub helps our community to showcase their innovations and discoveries by:

- Providing individual consultations.
- Facilitating programmatic group activities (courses, events, and workshops).
- Curating scientific writing and communication resources.
- Facilitating community building.



Whether you are just getting started on your writing journey or have already traveled far, the IANR Science Communication Hub can support your academic journey and research.



- **Resources for students**
- **Resources for faculty**
- **Events and workshops**

Consultation and community

[Make an appointment](#)

[Submit work for review](#)

[Subscribe to sit-down-and-write email list](#)



THE CASNR
**CHANGE
MAKER**
COMPETITION

How Do You Want to Make a Difference in the World?

SPONSORED BY THE COLLEGE OF AGRICULTURAL SCIENCES AND NATURAL RESOURCES (CASNR)

**Here is your chance to share what you will tackle to
leave your mark on the world.**

Do you have an idea for making a difference in the world? Pitch us your idea in a 2-minute video. If your idea is selected you could earn a CASNR scholarship and have the chance to work directly with mentors on tackling your big idea.

#ThisIsCASNR



High-level IANR final budget reductions

IANR Reduction Target = **\$10,112,097**

FY21 (\$3,563,463) / **FY22** (\$2,555,430) / **FY23** (\$3,993,204)

- 10% Administrative Reduction – VC IANR, CASNR, ARD, Extension - **~\$1.9M** – elimination of 6 administrative positions and reduction of operating budgets
- Elimination of open lines and conversion to non-state funds - **~\$6.3M**
 - Faculty positions (all types) - ~\$3.5M – vacant and projected attrition
 - Vacant staff positions **proposed by units** - ~\$1.1M
 - Research support staff **proposed by units** – elimination of open lines and transitioning of others to non-state sources - ~\$1.7M
- Program Reduction/Realignment - **~\$0.6M** / Proposed elimination of the ARD and Extension state-aided support for the Department of Textiles, Merchandizing, Fashion Design (TMFD) / Proposed elimination of the CASNR Hospitality Restaurant Tourism Management (HRTM) degree program
- Reduce use of student remissions by 10% - **~\$1.3M** / replace remissions with funded scholarships, fellowships, and grant funding



Omaha World-Herald

What to watch as the Nebraska Legislature starts its 2021 session

LINCOLN — Nebraska lawmakers will be back at it on Wednesday, just over four months after concluding a 2020 session interrupted by the coronavirus pandemic.

State senators are already predicting some tough sledding ahead as they tackle the partisan-laced issue of congressional and legislative redistricting and try to craft a balanced budget amid the uncertainty of a pandemic-affected economy.

That's despite an effort by some moderate legislators to instill more civility and collegiality into the officially nonpartisan 49-member unicameral Legislature, which has seen an increase in angry exchanges and bitter partisan bickering in recent years.



Nebraska revenue forecasting board increases tax collection estimate

JoAnne Young Oct 30, 2020 Updated Dec 4, 2020 

Nebraska's revenue forecasting board has raised estimates on what the state can expect in sales, income and miscellaneous taxes in the current and next two fiscal years.

The three-year total predicted by the Nebraska Economic Forecasting Advisory Board is an increase of \$710.5 million, or \$605 million after transfers to the state's rainy day fund and minimum reserve.

Increase estimates for each fiscal year were: \$285 million in 2020-21; \$118 million in 2021-22; and \$307 million in 2022-23.

The state is already \$84 million above the August certified tax forecast, and is likely to be \$120 million ahead when October is completed, said Chief Fiscal



Farm Economy Outlook Improving in 2021

The farm economy outlook is improving thanks to trade, COVID-19 relief, and a market rally. Micheal Clements shares specifics on the improving conditions from the American Farm Bureau Federation.

Clements: The new year is bringing some optimism for the farm economy, thanks to multiple factors. Farm Bureau Chief Economist John Newton says one of those factors is trade with China, which could reach near record levels.

Newton: Recently released data from the U.S. Census Bureau show that preliminary exports to China during November [are] nearly \$5 billion. So, when you add that to the existing total, we've now sold about \$22.5 billion to China. So, that's significant progress and a step in the right direction. We're unlikely to hit the Phase One targets, but we



COVID-19: NEBRASKA RESPONDS



Home

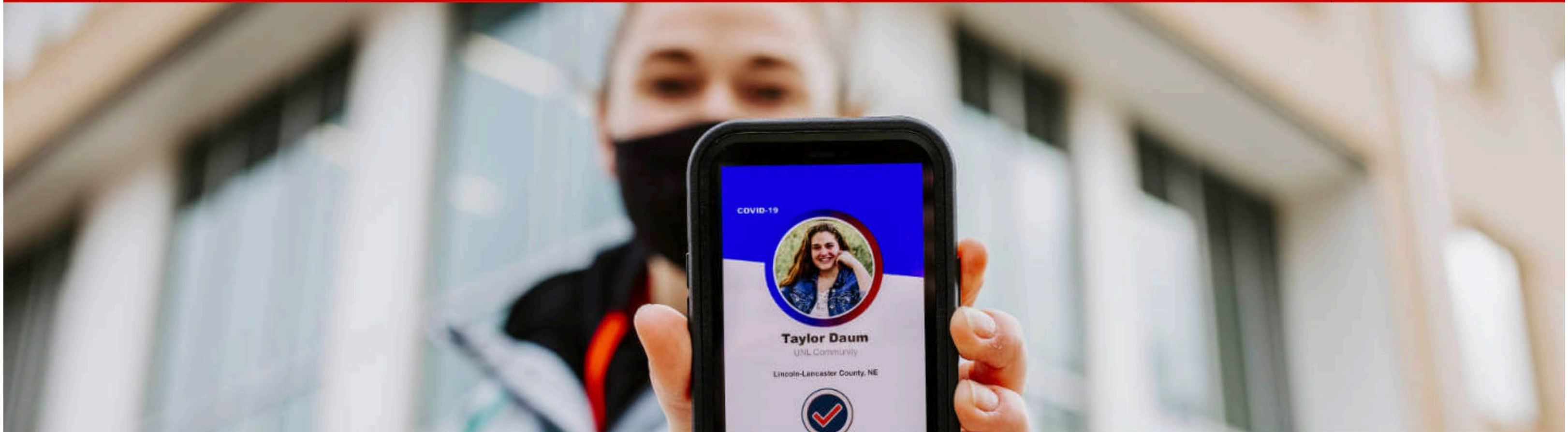
Health & Safety

Testing, Reporting &
Contact Tracing

Information For ...

Facilities & Events

FAQ / Contact Us



PROTECT YOURSELF AND OUR HUSKER COMMUNITY

UNL is providing saliva-based diagnostic testing to protect our campus community this semester, paired with a new app called Safer Community.

[Spring Testing](#)

[Make Your Commitment](#)

[Download the App](#)

[Request an Exemption](#)



Total Vaccines Distributed

248,741

Total Vaccinations Administered

153,231

First Dose in Series Received

119,053

Second Dose in Series Received

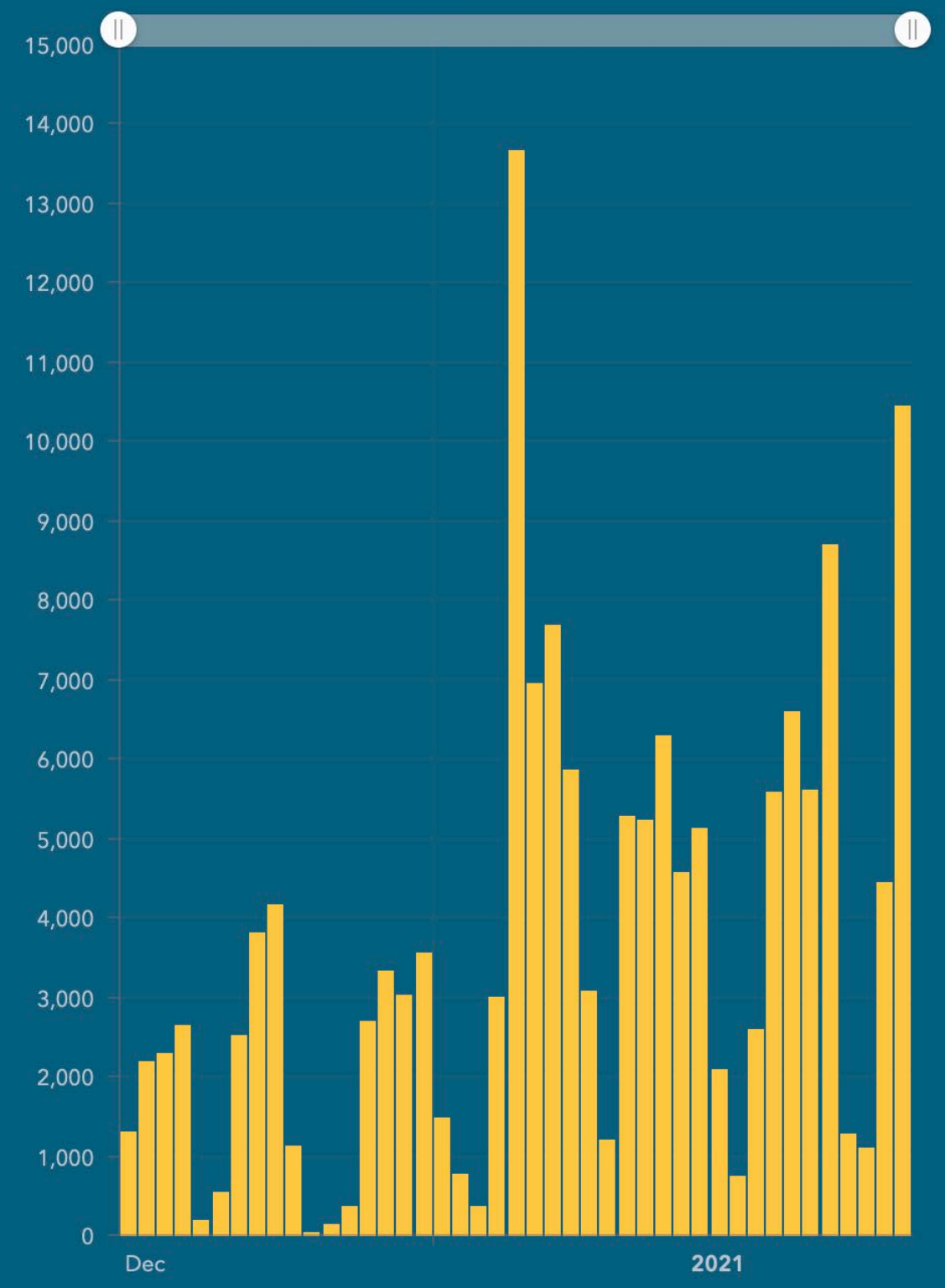
34,178

Percentage of Population 16 and Older Completing Vaccination

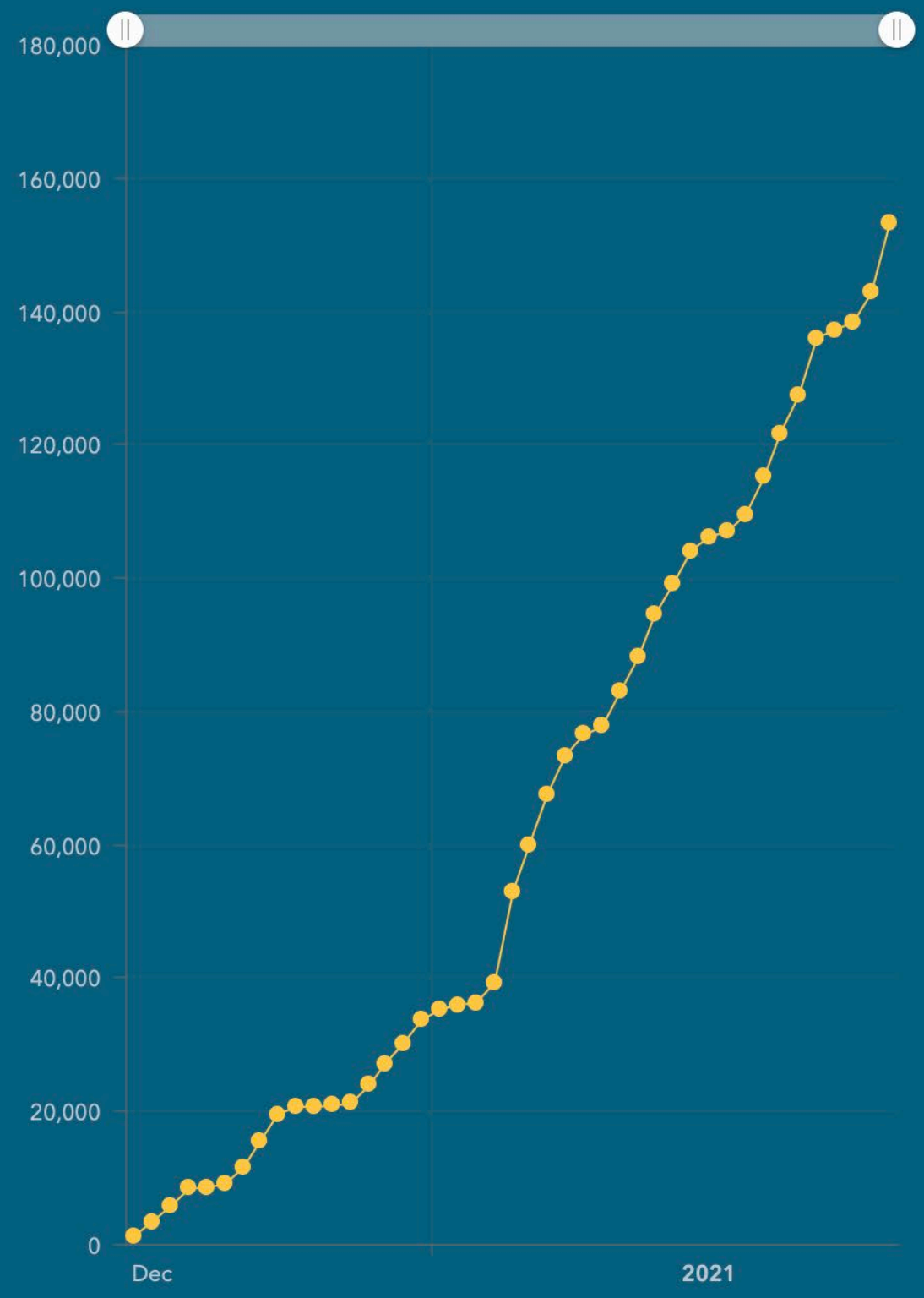
2.3%

of 1.48M People

Daily New Vaccinations Administered



Cumulative Total of Vaccinations Administered



IANR Diversity and Inclusion Advisory Group



Simanti Banerjee
Agricultural Economics



Michael Bergland-Riese
NE Extension



Brytany Gama
ALEC



Jackie Guzman
NE Extension EZ1



Holly Hatton-Bowers
CYAF



Angi Heller
Engagement Zone 8



Lisa Karr
Animal Science



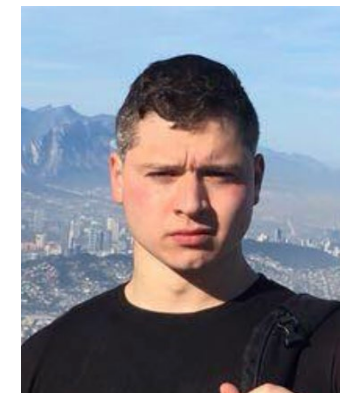
Martha Mamo
Agronomy & Horticulture



Bobby Skates
WCREC



Ashley Stengel,
Complex Biosystems



David Velazco
Animal Science



Ana Maria Velez
Entomology

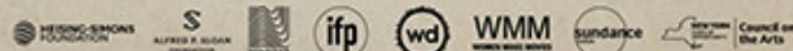




PICTURE A **SCIENTIST**



AN UPRISING PRODUCTION | IN ASSOCIATION WITH THE WONDER COLLABORATIVE | A FILM BY SHARON SHATTUCK AND IAN CHENEY - PICTURE A SCIENTIST
EXECUTIVE PRODUCER AMY BRAND | EDITED BY NATASHA BEDU | CO-PRODUCERS IRENE YADAO AND OLUMASEUN BABALOLA
PRODUCED BY NANETTE POTTLE, IAN CHENEY, SHARON SHATTUCK | DIRECTED BY IAN CHENEY AND SHARON SHATTUCK



pictureascientist.com

Illustrations by Sean McElroy | Poster Design by Ed Morgan

Campus-wide virtual screening: Feb. 23-25
Panel discussion: Feb. 25

Sign up: ianr.unl.edu/picture-scientist-signup



Diversity, Equity and Inclusion at IANR



Valuing diversity.
Creating opportunity.
Accelerating inclusion.
Fostering belonging.
Maximizing impact.

We value the contributions of each person and strive to make each interaction matter. We are committed to engaging in practices that demonstrate the value of diversity and inclusive excellence.



[Nebraska](#) › [IANR Home](#) › [Faculty & Staff Resources](#) › [Diversity and Inclusion at IANR](#) › IANR Activities and Initiatives Leading to Inclusivity and an Appreciation of Diversity

IANR Activities and Initiatives Leading to Inclusivity and an Appreciation of Diversity

We recognize that diversity and marginalization can be present at the same time. We are intentional in our efforts to ensure that doesn't happen in IANR. Achieving diversity requires that we use a certain set of strategies. Achieving inclusion requires the use of some of these same strategies and others as well. The keys to success in both are *intentionality*, *accountability*, and *reflective practice*. These three principles are woven throughout everything that we do.

Among the most powerful signals of our commitment to diversity and inclusion are who we hire and who we promote. Consequently, many of our current initiatives related to diversity and inclusion focus on our search and hiring practices, our practices related to

KEYS TO CREATING AN INCLUSIVE AND WELCOMING IANR

- [Be intentional](#)
- [Be accountable](#)
- [Be reflective](#)

IANR Diversity and Inclusion Suggestion Form

We welcome and encourage your ideas, questions and feedback as we work toward a more inclusive, more accessible, and more just IANR.

This form is anonymous. Please feel free to include your name and email if you like.

*** Required**

Suggestion *

Your answer

Name (optional)

Your answer

Email (optional)



Pause for questions from the Zoom Chat



AgLines: UNL's ag research facility to receive federal funding



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“With this new funding, USDA will expand its strategic research investments in areas such as agricultural innovation and precision agriculture,” Fortenberry said. “This effort aligns the needs of our country and the university’s agricultural research mission.”

Planning Document – For Discussion Only

NICDC

**USDA Agricultural Research Service
National Center for Food and
Agriculture Innovation
at the Nebraska Innovation Campus**

Mike Boehm
NU Vice President
IANR Harlan Vice Chancellor



16 DEC 2020

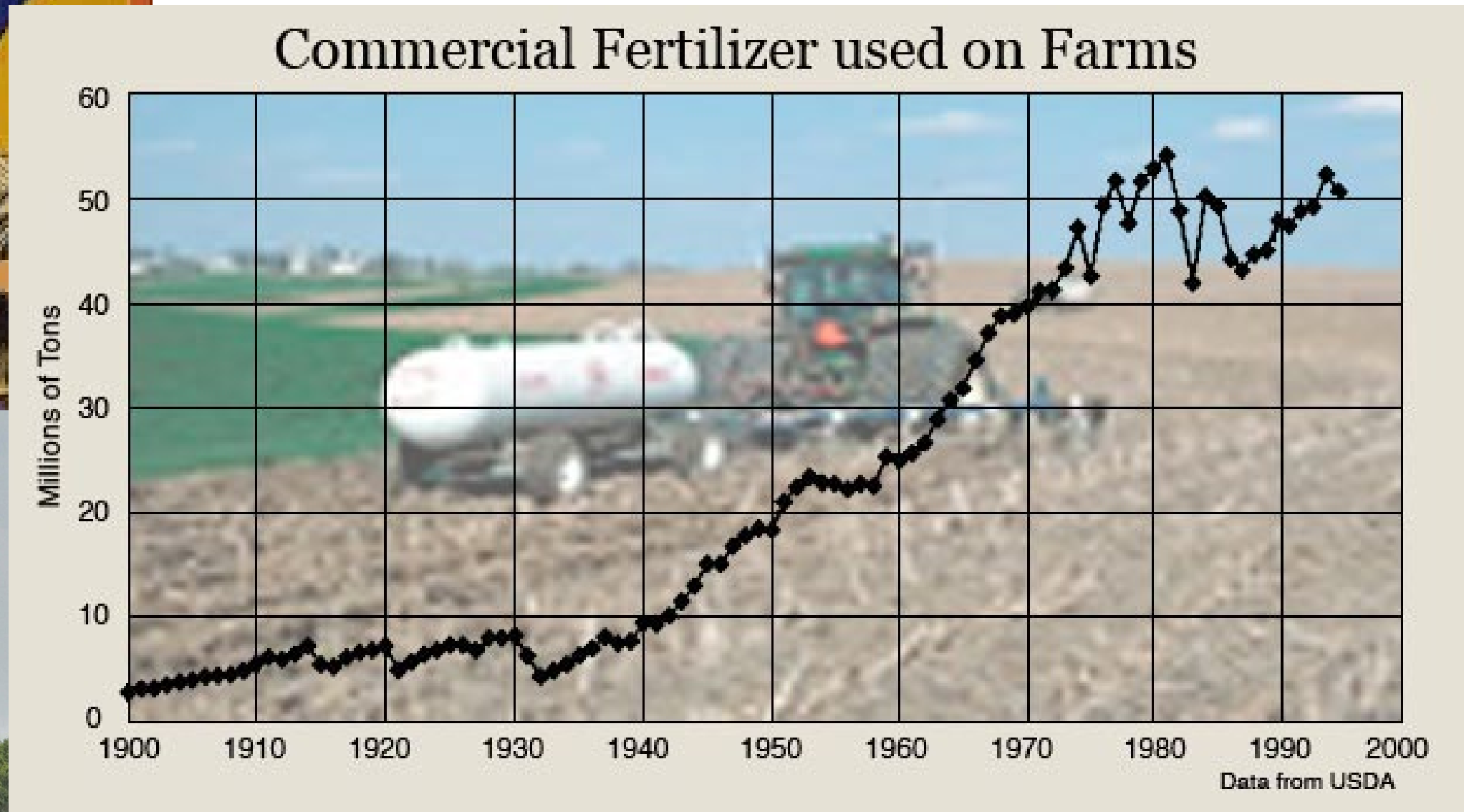
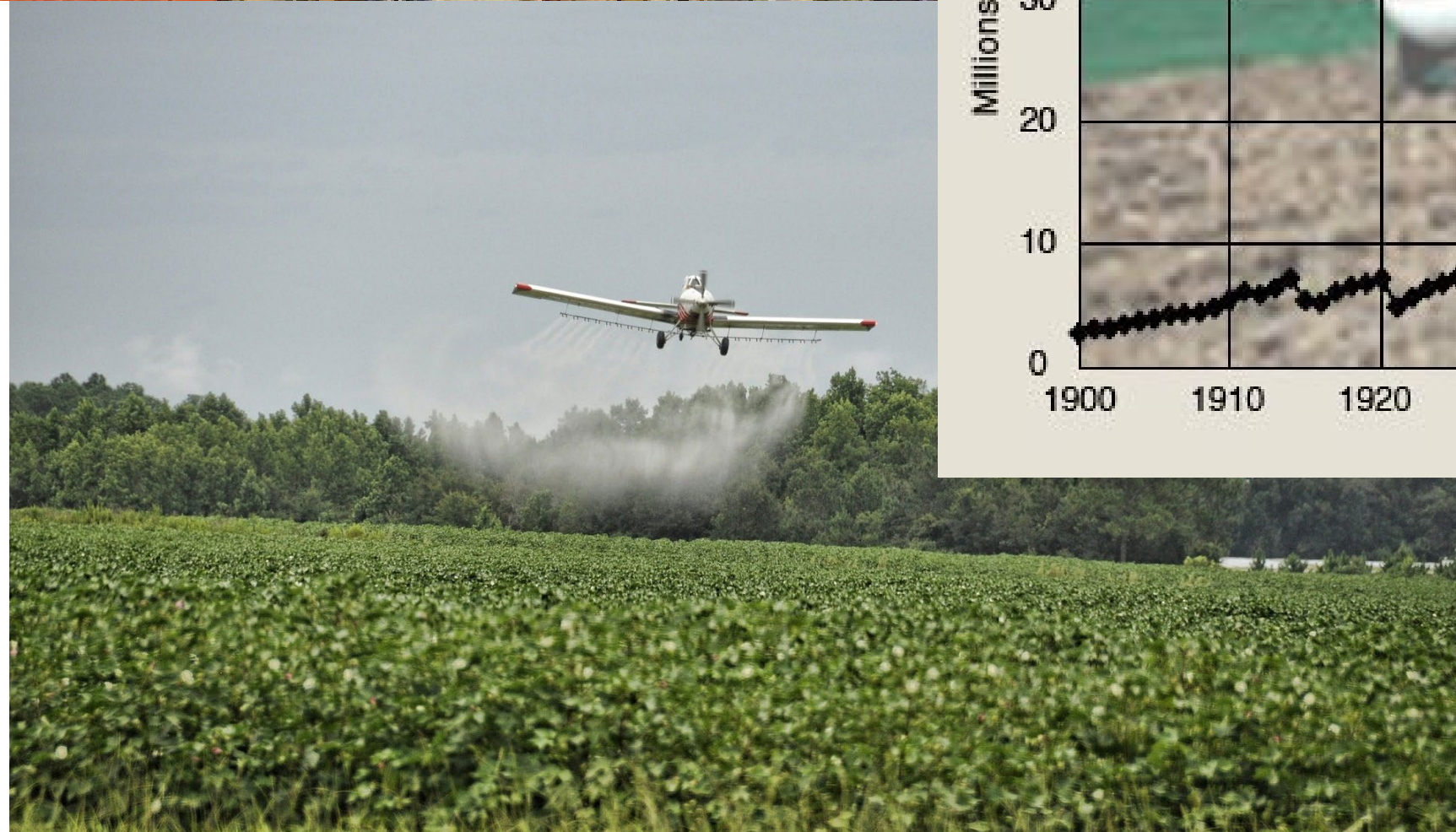
IN OUR GRIT, OUR GLORY™

Agriculture is Evolving... *and rapidly*

Thomas E. Smith, 1872-1948

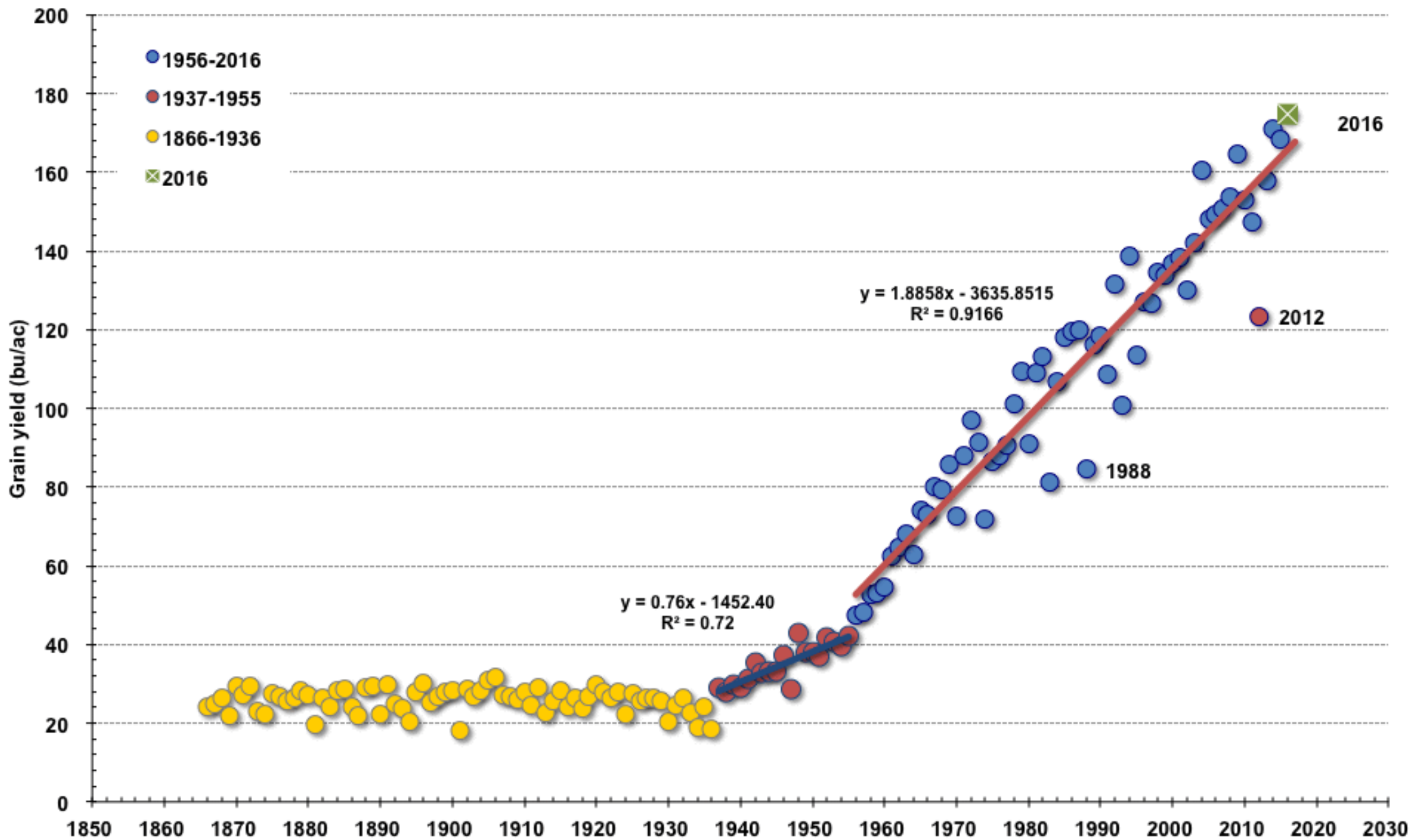


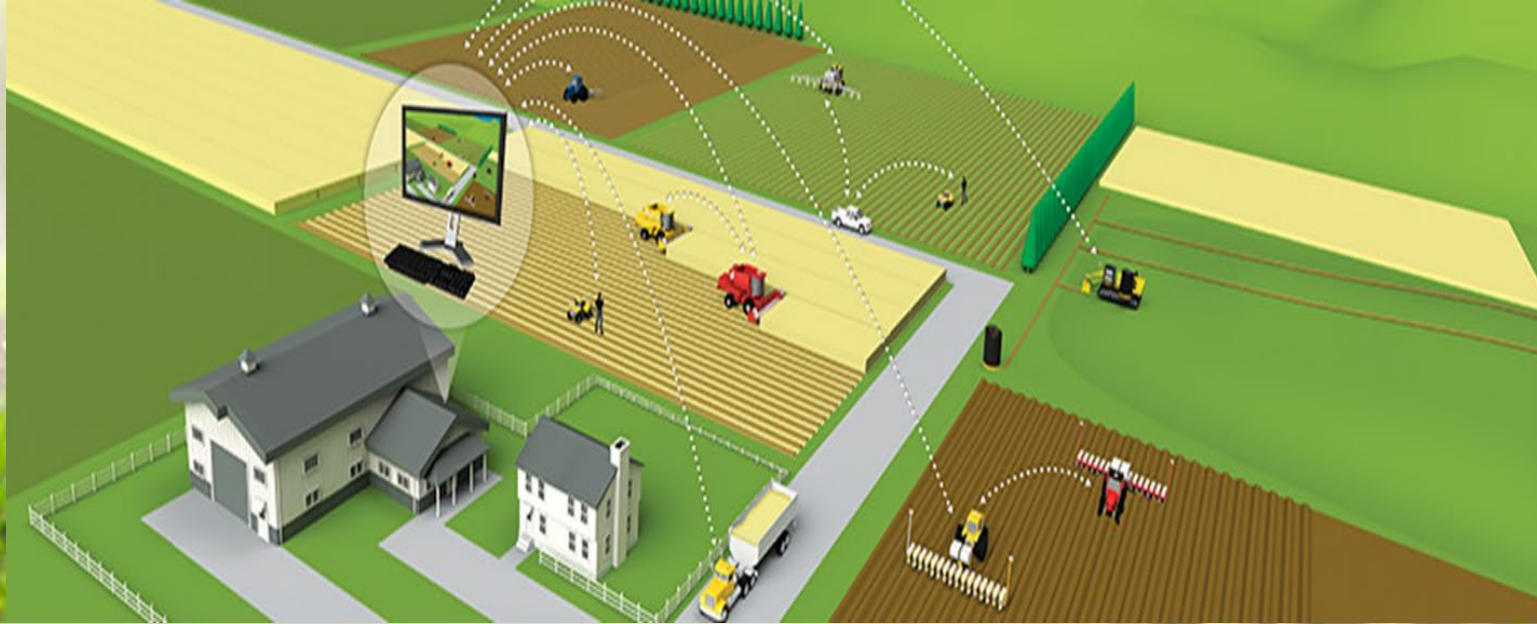




U.S. Corn Grain Yield Trends Since 1866

Data Source: USDA-NASS (as of Jan 2017)

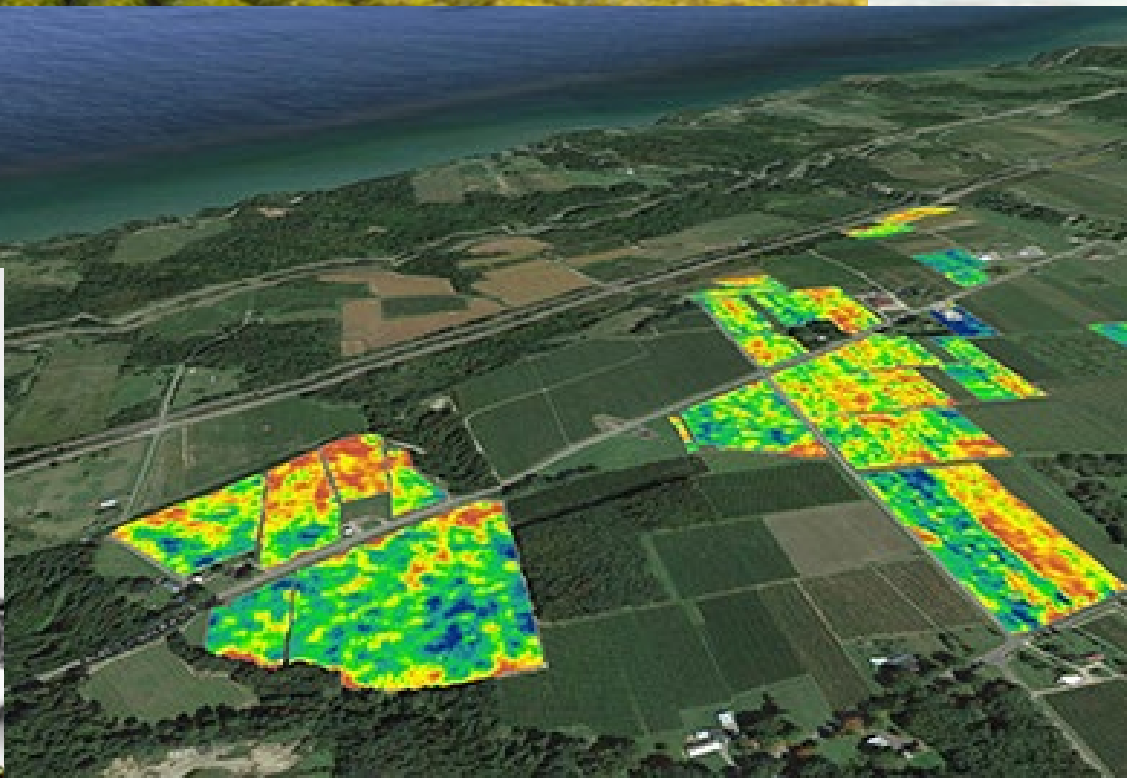




BLUE RIVER
TECHNOLOGY

Optimize Every Plant

Blue River Technology is building the next generation of smart agriculture equipment. We're introducing See & Spray technology, enabling a world in which every plant counts.



Next Generation Farming Systems 2040



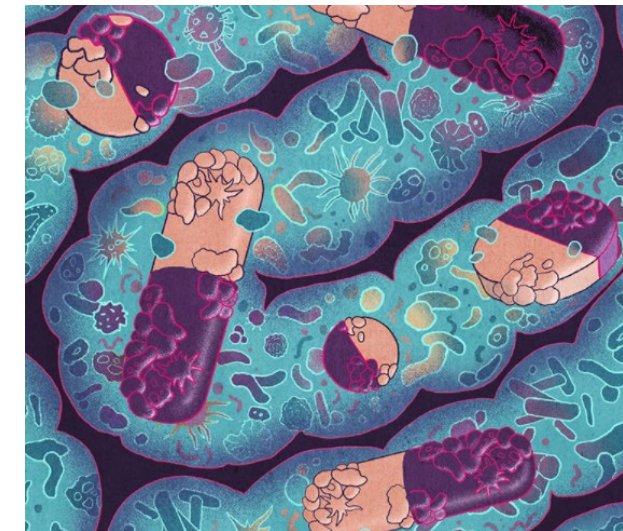
Could the gut microbiome be linked to autism?

Researchers are hoping to understand whether the microbes in our guts have a role in the disorder.



The complex relationship between drugs and the microbiome

Scientists know that the microbiome has an effect on pharmaceuticals, and vice versa, but they are still trying to work out the various mechanisms involved.



OUTLOOK · 29 JANUARY 2020

Fighting cancer with microbes

Targeting the microbiome could hold the key to combating a range of malignant diseases.

Science Breakthroughs to Advance Food and Agricultural Research by 2030

A Consensus Study Report of the National Academies of Sciences, Engineering and Medicine
2019



‘For nearly a century, scientific advances have fueled progress in U.S. agriculture.’

‘U.S. farmers and producers are at the front lines and will need more tools to manage the pressures they face.’

Research Challenges

- Increasing nutrient use efficiency in crop production systems
- Reducing soil loss and degradation
- Mobilizing genetic diversity for crop improvement
- Optimizing water use in agriculture
- Improving food animal genetics
- Developing precision livestock systems
- Early and rapid detection and prevention of plant and animal diseases
- Early and rapid detection of foodborne pathogens
- Reducing food loss and waste through the supply chain

Science Breakthroughs and Recommendations

1. A **systems approach** to understand the nature of interactions among the different elements of the food and agricultural system can be leveraged to increase overall system efficiency, resilience, and sustainability.
2. The **development and validation of precise, accurate, field-deployable sensors** and biosensors will enable rapid detection and monitoring capabilities across various food and agricultural disciplines.
3. The **application and integration of data science, software tools, and systems models** will enable advanced analytics for managing the food and agricultural system.
4. The ability to carry out routine **gene editing of agriculturally important organisms** will allow for precise and rapid improvement of traits important for productivity and quality.
5. Understand the **relevance of the microbiome to agriculture** and harness this knowledge to improve crop production, transform feed efficiency, and increase resilience to stress and disease.

<https://www.nap.edu/read/25059/chapter/1>



Pacific West Area

Northeast Area

Midwest Area

Plains Area

Southeast Area



660 research projects within 15 National Programs
2,000 scientists and post docs
6,000 other employees

90+ research locations, including overseas laboratories
\$1.4 billion fiscal year budget

ARS Research Facility at Nebraska Innovation Campus



University of Nebraska-Lincoln
March 24, 2010



PHASING



~70,000 ft²

Total project cost - \$66.8M

(= \$86M building today)

Figure 2. Nebraska Innovation Campus Phase 1 and future phases. The ARS facility is Phase IA.

The **ARS Systems Biology Research Facility** at the University of Nebraska-Lincoln will be a state-of-the-art science research facility that addresses two areas of great concern in Nebraska and the nation: **renewable energy and water resource conservation and management**. The facility was proposed to enable co-location of 19 ARS scientists and their UNL cooperators and to provide leading edge facilities for research programs focused on: development of switchgrass as a cellulosic biomass energy crop; development of sorghum, wheat and forages as bioenergy crops; the effects on soil quality and water conservation of using crop residues for energy production; and the effects of increased biomass production and removal on water resources.

‘H. R. 7610 - A Bill making appropriations for **Agriculture, Rural Development, Food and Drug Administration, and Related Agencies** for the fiscal year ending September 30, 2021, and for other purposes’

Union Calendar No. 358

116TH CONGRESS
2^D SESSION

H. R. 7610

[Report No. 116-446]

Making appropriations for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies programs for the fiscal year ending September 30, 2021, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 13, 2020

Mr. BISHOP of Georgia, from the Committee on Appropriations, reported the following bill; which was committed to the Committee of the Whole House on the State of the Union and ordered to be printed

A BILL

Making appropriations for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies programs for the fiscal year ending September 30, 2021, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums are appropriated, out of any money in the Treasury not otherwise appropriated, for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies programs for fiscal year ending September 30, 2021, and for other purposes, namely:

TITLE I

AGRICULTURAL PROGRAMS

PROCESSING, RESEARCH, AND MARKETING

OFFICE OF THE SECRETARY

BUILDINGS AND FACILITIES

For the acquisition of land, construction, repair, improvement, extension, alteration, and purchase of fixed equipment or facilities as necessary to carry out the agricultural research programs of the Department of Agriculture, where not otherwise provided, \$11,200,000 to remain available until expended, to be allocated for ARS facilities co-located with university partners.

Hill leaders seek to clinch spending, coronavirus aid deals

Senate Majority Leader Mitch McConnell says an agreement is likely "sometime soon"



By **Jennifer Shutt and Lindsey McPherson**

Posted December 15, 2020 at 1:27pm, Updated at 10:42pm

Congressional leaders late Tuesday said they were close to locking down agreements on a \$1.4 trillion omnibus spending package and a coronavirus relief bill that could deliver up to \$1 trillion in additional aid.

If that schedule holds, the House could be ready to vote on the bill as early as Wednesday, though the path of a snowstorm that weather forecasters are anticipating may affect that timing.

Fortenberry achieves \$11.2M in funding for USDA agriculture research facility at Nebraska



Don Walton Dec 22, 2020 Updated Jan 10, 2021

Congressman Jeff Fortenberry, ranking member of the House Appropriations Subcommittee on Agriculture, was successful in achieving \$11.2 million in federal funding for the planning and design of a USDA Agricultural Research Service facility.

The funding is included in the federal 2021 omnibus appropriations bill, which was approved by Congress yesterday. Fortenberry said the University of Nebraska–Lincoln will be the site of the facility.



Jeff Fortenberry

“Congressman Fortenberry has been a tremendous supporter of moving agriculture into the 21st century and continuing America’s role as both the leading innovator and food producer in the world. He’s also been an incredible supporter of the ground-breaking work being done at our university,” Chancellor Ronnie Green said. “This project wouldn’t have happened without his hard work and diligence in obtaining funding. It’s



USDA Agricultural Research Service
National Center for Food and Agriculture Innovation
at the Nebraska Innovation Campus

Bold Idea: Nebraska is the epicenter of agriculture in the United States where cash receipts from farm and ranch marketing contribute over \$21 billion to Nebraska's economy and nearly \$6.8 billion in agricultural exports annually. As the third largest agricultural economy in the United States^{*}, Nebraska is known for the scale and diversity of its crop and livestock commodities and the abundance of its natural resources. Research expertise in food, agriculture, climate, water, and drought science, natural resources, and rural prosperity coupled with an established education pipeline, and a robust Agriculture Tech/Food Tech ecosystem, reinforce Nebraska's standing as a national leader in agriculture. The placement of a newly established **USDA National Center for Food and Agriculture Innovation** on the Nebraska Innovation Campus is the next bold step to ensure American agriculture remains *the* leader in feeding and fueling a growing world sustainably.

^{*}<https://data.ers.usda.gov/reports.aspx?ID=17844>



USDA Agricultural Research Service
National Center for Food and Agriculture Innovation
at the Nebraska Innovation Campus

The Objective: To collaboratively coalesce and leverage a decade's worth of strategic investments made by the State, the City of Lincoln, the University of Nebraska, the USDA, industry partners, entrepreneurs and investors to **transform Nebraska's 'Silicon Prairie' into the Nation's comprehensive hub for Ag Tech/Food Tech innovation***.

*'Modern farms and agricultural operations work far differently than those a few decades ago, primarily because of advancements in technology, including sensors, devices, machines, and information technology. Today's agriculture routinely uses sophisticated technologies such as robots, temperature and moisture sensors, aerial images, and GPS technology. These advanced devices and precision agriculture and robotic systems allow businesses to be more profitable, efficient, safer, and more environmentally friendly.'

*<https://nifa.usda.gov/topic/agriculture-technology>



USDA Agricultural Research Service
National Center for Food and Agriculture Innovation
at the Nebraska Innovation Campus

Key Enablers: UNL will request \$85 million to \$100 million in the FY2022 USDA ARS facilities budget for construction of a co-located facility at the NIC. This is a follow up to the \$11.2 million for planning and design of the facility included in the FY2021 omnibus appropriations bill. Nebraska delegation member most suited to make request: Congressman Fortenberry.

A **request** will be made to Dr. Chavonda Jacobs-Young, USDA ARS Administrator, to locate **25 newly created scientist positions** plus associated support staff in this facility that directly align with **Ag Tech/Food Tech innovation**.

A **companion facility** constructed by UNL representing a **public-private-partnership - equal in size and scope** - will be built adjacent to the new ARS building **to augment and amplify impact and drive innovation**. Together, with the NIC's current innovation platforms, **this complex** will serve as the **new home** for the USDA's **National Center** for Food and Agriculture Innovation.

The Concept:



*That **supercharges the Ag Tech/Food Tech ‘innovation ecosystem’ at the NIC** into a highly attractive and accessible destination for those intent on creating Agriculture 2.0.*

The National Center will build strength on existing strengths and will focus on innovations in these five dimensions:

- ❖ Water, Climate and Resilience+ Rural Broadband
- ❖ Precision/Digital Crop Production, Health and Water Management + Rural Broadband
- ❖ Precision/Digital Livestock Production, Health and Well-being + Rural Broadband
- ❖ Entrepreneurship and Rural Community Prosperity + Rural Broadband
- ❖ Food for Health + Rural Broadband

Merck Animal Health Completes Acquisition of Quantified Ag[®]

Broadens Livestock Digital Portfolio to Improve Animal Well-being Through Connected Technology


June 17, 2020 04:30 PM Eastern Daylight Time

MADISON, N.J.--(BUSINESS WIRE)--Merck Animal Health, known as MSD Animal Health outside the United States and Canada, a division of Merck & Co., Inc., Kenilworth, N.J., USA (NYSE:MRK), today announced the completion of its acquisition of Quantified Ag[®], a leading data and analytics company that monitors cattle body temperature and movement in order to detect illness early. In April 2018, Merck Animal Health invested in Quantified Ag[®] and partially funded their development work in data analytics in livestock. Specific terms of the agreement were not disclosed.

Today's announcement further positions Merck Animal Health as a global leader in animal health, broadening its portfolio in connected technology to improve cattle health outcomes by leveraging data and analytics for animal health and well-being. Quantified Ag[®], located in Lincoln, Nebraska, provides a pro-active system for cattle producers and feedlot operators to track an animal's biometrics and behavioral data through a non-invasive cattle ear tag equipped with sensors to monitor the health of the individual animal or herd. The technology can detect animal illness, thus reducing the potential for disease outbreak, allowing for easy identification of sick animals, and providing easy-to-use software reports on any mobile device, desktop, tablet or secure website. Proprietary algorithms are able to identify animals showing signs of illness or disease and provide real-time alerts.

Quantified Ag[®] product portfolio will join the Allflex Livestock Intelligence business unit within Merck Animal Health. Allflex Livestock Intelligence is a complementary business that specializes in identification and monitoring technology that delivers real-time, actionable data and insights to help improve livestock management.



MERCK & CO., INC.
[NYSE:MRK](#)  

Release Summary

Merck Animal Health Completes
Acquisition of Quantified Ag[®]

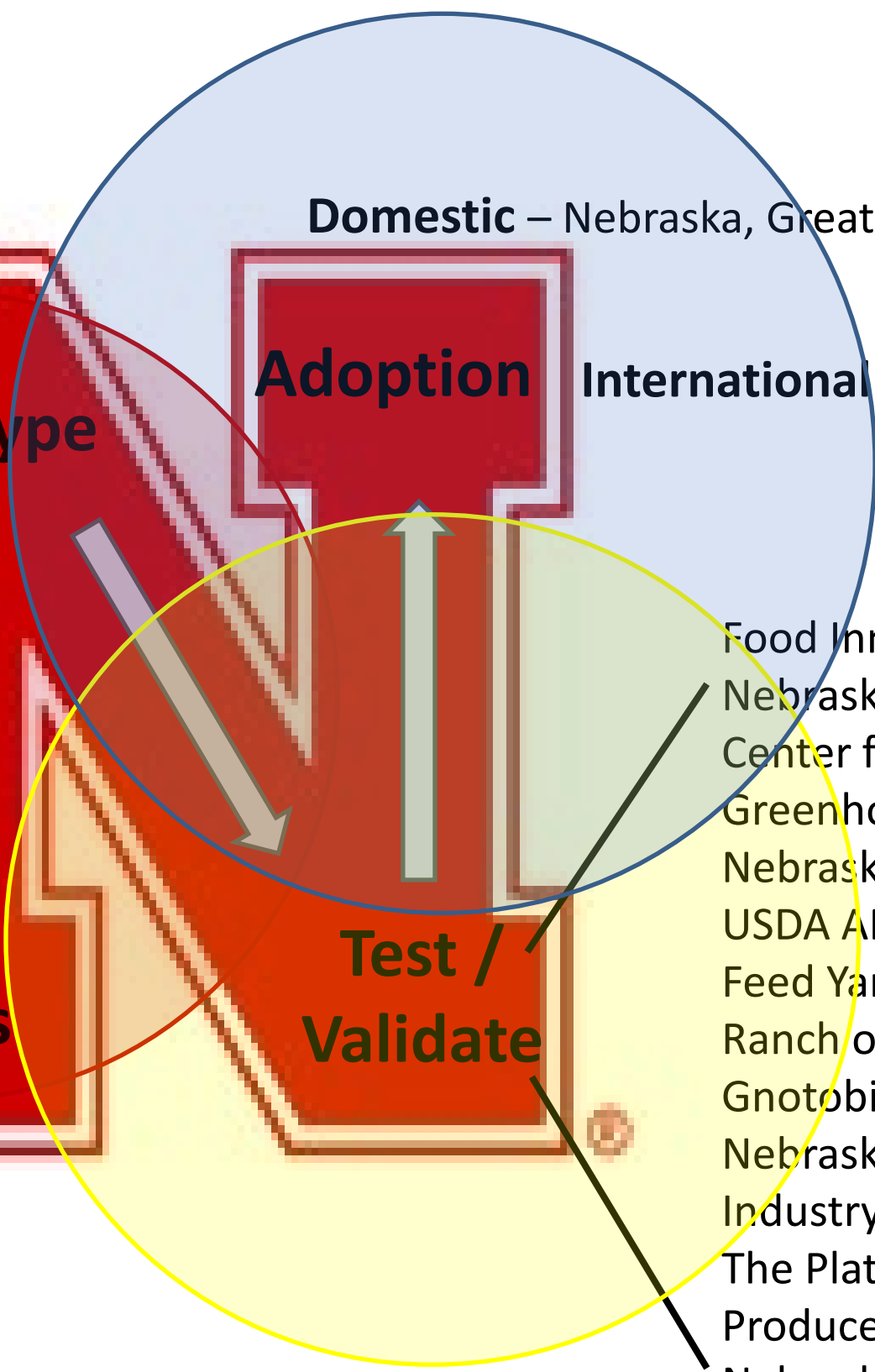
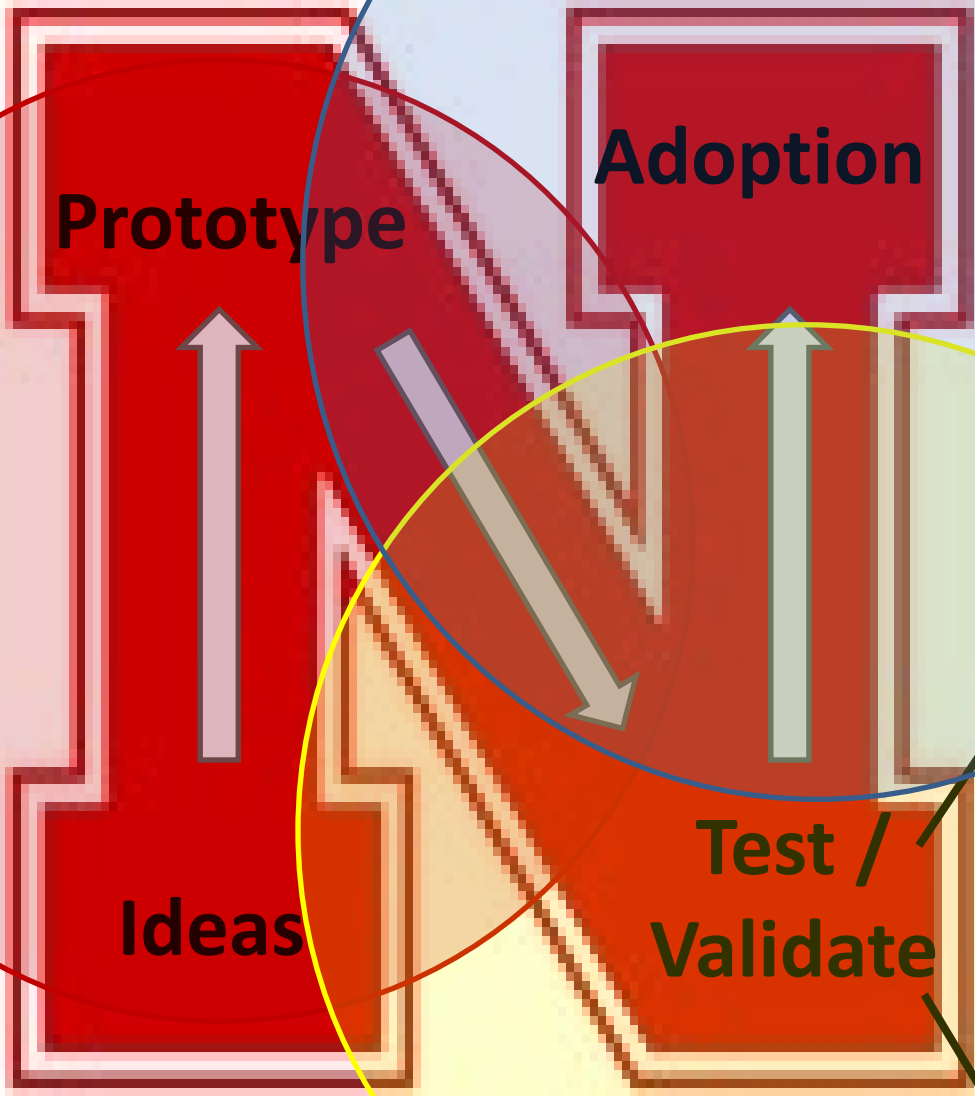
Tweets by @Merck



Bravo to @Pfizer and BioNTech Group for bringing forward the first vaccine authorized for emergency use in the US to help address the #COVID19 pandemic. #ScienceWillWin



PROPOSED
 USDA Agricultural Research Service
National Center for Food and Agriculture Innovation
 at the Nebraska Innovation Campus



Domestic – Nebraska, Great Plains, U.S.

International – DWFI, RICA, EHI, CGIAR Centers

- Food Innovation Center
- Nebraska Food for Health Center
- Center for Plant Science Innovation
- Greenhouse Innovation Center
- Nebraska SmartFarms
- USDA ARS MARC
- Feed Yard Innovation Center
- Ranch of the Future
- Gnotobiotic Facilities
- Nebraska Tractor Test Laboratory
- Industry Partners
- The Platte River – High Plains Aquifer
- Producers, Processors, Manufacturers
- Nebraska Center for the Prevention of Obesity Diseases
- Farmers, Ranchers and Producers

Farm of the Future
 Testbed Platforms



PROPOSED
USDA Agricultural Research Service
National Center for Food and Agriculture Innovation
at the Nebraska Innovation Campus

Key Action Steps:

- Pressure test idea with thought-leaders – internal and external (in progress)
- Presented to NICDC (16 DEC 2020)
- \$11.2M appropriated to USDA ARS for planning and design of the facility in the FY2021 omnibus bill (22 DEC 2020)
- Flesh out USDA ARS strategy and pressure test with ARS administrators – Ft. Collins and D.C. – Need to get that \$11.2M to UNL (next 45-60 days)
- Prioritize and position \$85 million - \$100 million ask as part of FY2022 Ag appropriations bill (now through DEC 2021)
- Align private-public partners (now through SEP/DEC 2021)
- Manage politics throughout process (on-going)



Pause for questions from the Zoom Chat



“There are only two ways to live your life. One is as though nothing is a miracle. The other is as though everything is a miracle.”

— Albert Einstein