

Agricultural Research and Cooperative Extension Impacts in the Face of COVID-19

Relief Funding to Maintain Support for America's Farmers, Families, and Businesses

Briefing for Senate Ag Approps Subcommittee, Senate Leadership, and Senate Committee
on Agriculture, Nutrition, & Forestry and affiliated staff

Tuesday, June 30th, 2020

11:30-12:00pm ET

BRIEFING AGENDA

- Welcome and Background
 - Caron Gala, APLU
- Research Disruption Examples
 - Daniel Scholl, VP Research and Economic Development, South Dakota State University
 - Shibu Jose, Associate Dean for Research, Director, University of Missouri Agricultural Experiment Station
- Extension Examples
 - Hannah Carter, Dean of Agriculture at the University of Maine
 - Chuck Ross, Director, University of Vermont Extension, College of Agriculture & Life Sciences
- Questions & Discussion
 - Katie Steen, AAU
- Resources



RESEARCH RELIEF RECOMMENDATIONS

- **At least \$26 billion** in supplemental appropriations to federal research agencies allocated as follows:
 - **U.S. Department of Agriculture (USDA) – \$380 million**
 - National Science Foundation (NSF) – \$3 billion
 - National Aeronautics and Space Administration (NASA) – \$2 billion
 - Department of Defense (DOD) – \$3 billion
 - Department of Energy (DOE) – \$5 billion
 - National Institutes of Health (NIH) – \$10 billion
 - NOAA, NIST, EPA, the Institute for Education Sciences, other federal agencies with research budgets greater >\$100 million – ~\$2.6 billion

USDA NIFA RESEARCH Request - \$300 M for capacity and competitive research costed extensions

- **Agricultural, nutrition, and food research in the lab, field, and farm has been stalled since mid-March due to the pandemic emergency related safety requirements.**
 - Growing/reproductive seasons have been missed, risking breeding lines, pest/disease innovations, and other research critical to the agricultural sector.
 - Public and private institutions are ramping-up research, but it is extremely costly.
- **Innovation and technology transfer is on hold.**
 - Technical expertise has been turned to writing new proposals.
- **The uncertainty of costed extensions is high.**
 - Costed extensions are needed to be able to purchase materials/cell lines, maintain and hire staff, ensure safety, and maintain pace on innovative research.

Dr. Daniel Scholl

VP Research and Economic Development
South Dakota State University

Agricultural related research in several colleges accounts for approximately 50% of South Dakota State University total extramural research funding.



What is the true cost of these impairments? *Damage to U.S. Agriculture Competitiveness - Inestimable*

Cost to competitive advantage exceeds our monetary estimates.

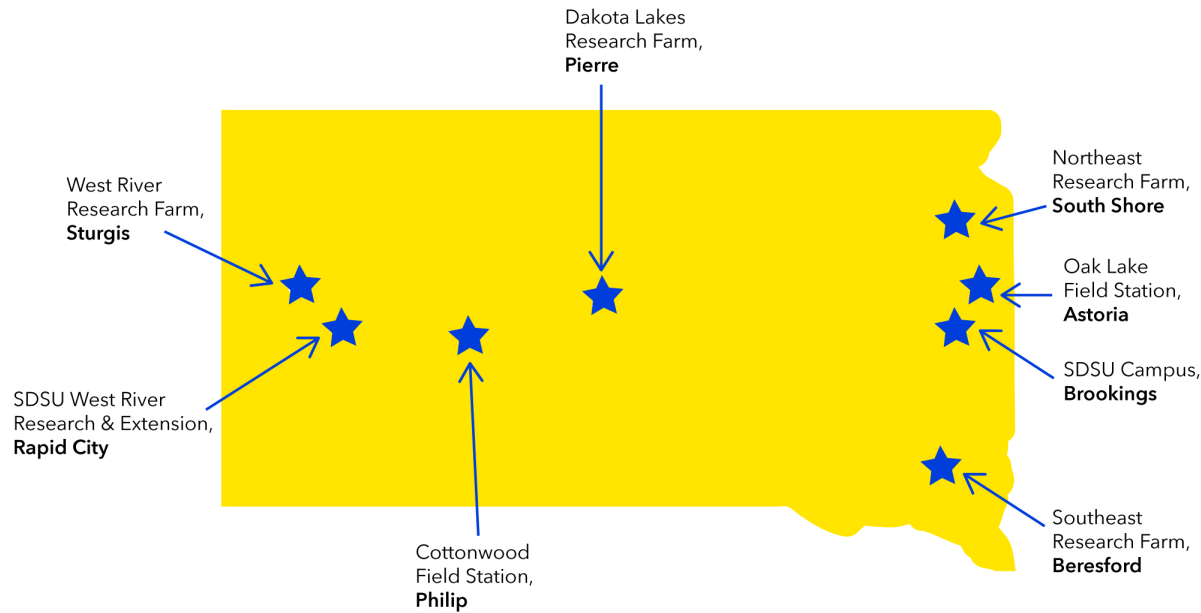
- Innovation is slowed, putting our international competitive advantage at risk.
- Pest, genetic, disease discoveries may be lost without support.
- Delayed discoveries to address critical issues, result in economic losses to ag sector.
- Ag product market loss and efficiency loss: inestimable.

Risk loss of invaluable innovators

- Without adequate funding, we risk losing 100+ emerging innovators (45 PhD; 64 MSc).
- 30% faculty are early career researchers and scientists.
- 67 undergraduate student research projects are delayed.

What are we risking?

Research Station Locations



The United States has outstanding ROI for USDA NIFA research investments – for every 1\$ invested, we see a \$20-\$60 return to our ag economy. This is at risk.

- \$2.25 M – Costs In salaries to keep high-value talent working for SDSU without costed extensions!
- \$3.30 M - Costs from ramp-down and delayed/imperiled projects
- \$2.20 M – Decreased commodity and industry partnerships

Ramp-down requirements – Ramp-up costs

- COVID-19 Disruptions damaged vital materials
 - Example: Fungal culture contamination -- delayed, costly restart
- Experiments are taking longer to complete
 - Delayed field work magnified in delayed lab work
- Rural health research is halted for lack of study participants



Dr. Shibu Jose

Associate Dean for Research, Director
University of Missouri Agricultural Experiment Station

RESEARCH DISRUPTION – University of Missouri College of Agriculture Food and Natural Resources



- Research ramp down due to COVID-19 stay-at-home orders, campus shutdown and social distancing requirements began in mid-March, crippling the CAFNR research enterprise
 - Faculty (~200), graduate students (~370), research staff (including postdoctoral scientists and technical staff ~600) were all affected; early career faculty 35%
 - Several experiments- both laboratory and field - were cancelled or terminated or delayed due to campus shutdown and travel restrictions
 - Severe disruption to research progress; setting some back to six months to one year
 - Some experiments need to be repeated in the field again next growing season
 - International research collaborations are postponed

5% Essential personnel engaged in research by March 20 – Keeping animal, plants and cell culture lines alive

42.8% Back to lab/field research as of 6/29/2020; in other words, 57.2% still staying home



RESEARCH DISRUPTION – University of Missouri College of Agriculture Food and Natural Resources



- Working from home and research ramp down impacted lab and field research progress severely and there is a substantial cost associated with ramp up
- But faculty are still productive in other ways
 - Active participation in research discussions via Zoom
 - 27% increase in grant proposal submissions in the last three months compared to the same three months last year
 - New collaborations are being formed
 - Postdoctoral and graduate student advising continues
 - Teaching continues using online platforms

\$1.6M Estimated revenue loss to research from cancellations of service contracts, sales, venue rentals etc. in a year

\$2.6M Additional salary for research staff and students for 12 months to bring research projects to meaningful conclusion

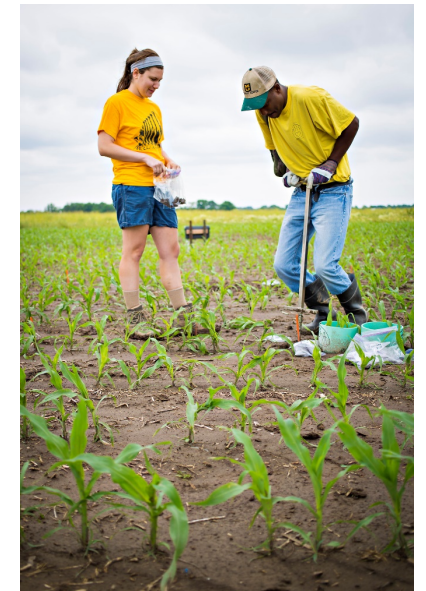
\$2.1M Additional materials & supplies, equipment and travel expenses (e.g. one person per car; additional cleaning, PPE)



RESEARCH DISRUPTION – University of Missouri College of Agriculture Food and Natural Resources



- **The Capacity (Hatch, McIntire Stennis and Evans-Allen) and Competitive Funding (AFRI) from NIFA is the lifeline of land grant colleges like CAFNR**
 - Our researchers have shown their resiliency and resolve
 - COVID-19 related campus and community restrictions are hamstringing their progress while research related expenses accumulate (e.g., students, postdocs and technicians still have to be paid, equipment and animal facilities have to be maintained)
 - Additional help in terms of 6 to 12 months of funding can help bring important agricultural research to meaningful conclusions with the expected outputs and outcomes; otherwise a good part of the current federal investment in agricultural research stands a chance of being wasted



Dr. Hannah Carter

Dean

University of Maine Cooperative Extension

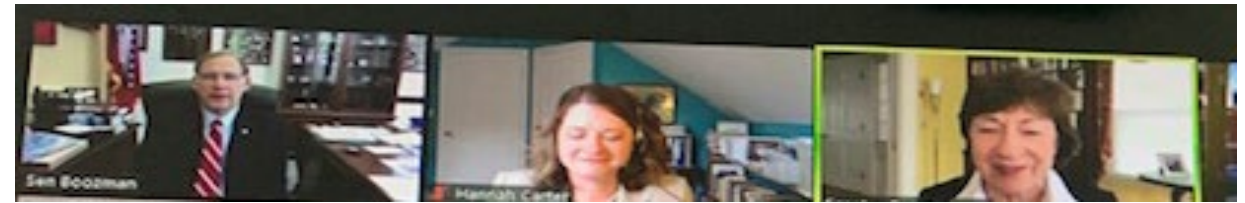
UMaine Cooperative Extension & COVID-19

❖ Tripartite mission of Land Grants

- Funding structure – Smith Lever, 1890s Extension, state and local funding
- “Best kept secret”
- “Trusted Source” of information

❖ Ability to pivot what we do to address needs of:

- Farms
- Families
- Businesses
- Communities



Impacts of COVID-19

- ❖ Cancellation of our 2020 summer camping program – **16,000 kids and \$1.9 M in revenue**
- ❖ Unable to fill positions to support critical ag industries – **IPM to support potato and apple/small fruit industries**

Moving Forward – Supporting farmers, businesses, communities recover from COVID-19 via...

- Advanced programming in-person and via on-line education
- Increasing capacity of small businesses
- Increasing youth development experiences and education



Dr. Chuck Ross

College of Agriculture & Life Sciences

University of Vermont Extension

USDA NIFA EXTENSION Request - \$80 M for the Cooperative Extension System for economic recovery

Programming to serve farmers, families, businesses and communities in the areas of:

- Financial health
- Human health
- Farm businesses
- Youth development



Supplemental Appropriations REQUEST - \$380M

Consistent with the university research community's [relief request](#) of \$26 Billion, we recommend the following breakdown for USDA NIFA's portion:

\$300M in supplemental funding for FY20 that supports research for:

- **\$85 M** - Hatch Act (Research and Education Programs)
- **\$36.2 M** - Evans-Allen (Research and Education Programs)
- **\$11.8 M** - McIntire-Stennis (Research and Education Programs)
- **\$150 M** - AFRI (Research and Education Programs)
- **\$5 M** - Research Grants for 1994 Institutions
- **\$12 M** - Federal Administration
- \$80M in supplemental funding for FY20 to support the Cooperative Extension System
 - **\$63 M** - Smith-Lever (Extension Activities)
 - **\$11.5 M** - 1890 Extension (Extension Activities)
 - **\$5.5 M** - NTAE & Extension Services at 1994 Institutions

RESOURCES

- MARKER BILL – [Bipartisan Research Investment to Spark the Economy \(RISE\) Act, H.R. 7308](#)
- CRS Report: Effects of COVID-19 on the Federal Research and Development Enterprise (4/10/20) - <https://crsreports.congress.gov/product/pdf/R/R46309>
- Letter of Support by 33 Senators to Leadership (5/4/20) - <https://www.markey.senate.gov/imo/media/doc/CV4%20Research%20Relief.pdf>
- Letter of Support by 182 House Members to Leadership (4/29/20) - <https://degette.house.gov/sites/degette.house.gov/files/Letter%20to%20House%20Leadership%20on%20Emergency%20Research%20Funding%20Final%204.29.pdf>
- AAU-APLU-AAMC-ACE April 7, 2020 Letter - <https://www.aau.edu/sites/default/files/AAU-Files/AAU-AAMC-APLU-ACE%20COVID19%20Research%20Recommendations%204-7-20.pdf>
- AAU-APLU-AAMC-ACE May 27, 2020 Letter - <https://www.aau.edu/sites/default/files/AAU-Files/Key-Issues/COVID-19/1ResearchReliefSenateLetter5-27-20Final.pdf>



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