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NIFA Update - Nov. 18, 2020

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NIFA UPDATE
NATIONAL INSTITUTE OF FOOD AND AGRICULTURE

Editor: Kelly Sprute ***November 18, 2020***

Making a Difference

HLB infected oranges, photo courtesy of Texas A&M AgriLife.

Researchers Make Breakthrough in Fighting Agricultural Plant Diseases

Texas A&M AgriLife researchers have made a discovery that will help combat fastidious pathogens, which cost U.S. agriculture billions of dollars annually.

Fastidious plant pathogens infect citrus, tomatoes, potatoes, grapes, peppers and other crops grown throughout Texas. Often transmitted by insect vectors, these disease agents cause billions of dollars of damage each year. The U.S. citrus industry alone would save $3 billion per year through control of just one of these diseases, citrus greening.

One obstacle to understanding and controlling fastidious pathogens was the inability to cultivate them in a laboratory setting and to screen for potential therapies. These bacteria are believed to be responsible for Huanglongbing, also known as citrus greening disease, and other insect-vectored diseases such as potato zebra chip and tomato vein greening disease.

For the past few years, Texas A&M AgriLife Research scientist Kranthi Mandadi and his colleagues have been developing new biological technologies to fight fastidious or “unculturable” pathogens. Their work, “Plant hairy roots enable high throughput identification of new antimicrobials against Candidatus Liberibacter spp,” was recently published in Nature Communications.

This research is funded by USDA’s National Institute of Food and Agriculture’s Emergency Citrus Disease Research and Extension program, the Foundation for Food and Agricultural Research, and AgriLife Research’s Insect-Vectored Disease Grant. For more information, read the Texas A&M AgriLife Today article.

NIFA News

NIFA's Grant Terms and Conditions Updated

NIFA has updated our Terms and Conditions to align with the updates to 2 CFR that became effective on November 12, 2020. Please visit NIFA's Terms and Conditions website to view the updated documents. NIFA’s Office of Grants and Financial Management - Awards Management Division (AMD) will use the updated terms and conditions when issuing new Federal grants. AMD will update all awards or amendments issued on or after November 12, 2020 with the updated terms and conditions. Existing awards approved prior to November 12, 2020 will only be actively updated with the new terms and conditions when amended.

NIFA Invests Over $10.5 Million to Support Educators, 4-H, and Others in Workforce Training During Pandemic

NIFA recently announced an investment of more than $10.5 million to support educators at technical schools, community and junior colleges, and youth development programs across the nation. These institutions are deploying innovative techniques and technologies to continue offering high-quality skill development during these unprecedented times. NIFA will invest in eight regional or national projects to support their efforts. “The work of educators in Extension and technical colleges across America to persist in providing effective learning experiences for youth and families has been truly remarkable over the past eight months,” said USDA-NIFA Acting Director Parag Chitnis. For more information, read the NIFA release.

Image of technical research student, courtesy of Getty Images.

USDA Announces Scholars Programs for Students at Historically Black and Tribal Land-Grant Colleges and Universities

Twenty-first century agriculture involves cutting-edge science, technology, business management – and you. USDA recently announced scholarships to help you build a career path in agriculture, food, natural resource sciences, and many more agriculture-related subjects. The USDA/1890 National Scholars Program was established in 1992 in partnership between USDA and 19 historically black universities that were established under the Second Morrill Act of 1890. The program provides full tuition, fees, books, room and board, and a summer internship to students pursuing degrees in agriculture, food, natural resource sciences, or related academic disciplines. For more information, read the USDA press release.

NIFA Career Opportunities

We are hiring! Remember to check out NIFA's Career Opportunities webpage, where there is a direct link to all open positions. You can also explore NIFA jobs at the USAjobs.gov website. Current openings in Kansas City, Missouri:

Public Affairs Specialist (Digital Media), GS 9-11
Closing date: 11/25/2020

News for You

Two Things You Don't Often Hear Together -- Robotics and Oysters

Here are two things you don't often hear in the same sentence -- robotics and oyster farming. In this week's Agriculture USA, USDA’s Stephanie Ho talks with University of Maryland Professor Miao Yu about how technology can be used to improve aquatic life by developing a smart, sustainable shellfish management framework. Professor Miao Yu’s research is funded through a NIFA Agriculture and Food Research Initiative-Sustainable Agricultural Systems grant. For more information, listen to the USDA broadcast.

Learn more about the University of Maryland Extension project online.

Image of Chesapeake Bay Oysters, courtesy of Getty Images.

Tackling Food Allergies at the Source

About 7 percent of children and 2 percent of adults in the U.S. suffer from some kind of food allergy. These allergies cost $25 billion in health care each year. University of Arizona Professor of Plant Sciences Eliot Herman has spent his career studying why plants trigger allergic reactions and how to reduce the chance of them being triggered. Early in his career, Herman found the protein made by soybeans that is responsible for most soybean allergies. Now, he has dedicated his work to understanding why this protein is so aggravating and how we can reduce it in the crop.

To do so, Herman worked with a research team that bred pigs that are extra sensitive to soybeans, used to test new, non-GMO, low-allergen soybeans to determine if they are safe enough for allergic individuals. “By reducing soybean’s allergens, we hope to produce a positive medical outcome for humans and animals,” says Herman. This work is funded by

the United Soybean Board and USDA's National Institute of Food and Agriculture. For more information, read the American Society of Agronomy article.

An array of soybeans. Image courtesy of Eliot Herman.

NIFA Webinars

Applying for NIFA Competitive Education Grants: Small and Mid-sized Institutions

December 9, at 2 p.m. ET

Thinking about applying to NIFA's competitive education grant programs? Then sign-up for this webinar aimed to encourage applications to NIFA's competitive education programs from small and mid-sized institutions, including community colleges and non-profit organizations. NIFA staff will give an overview of competitive education programs and upcoming Request for Application deadlines for FY2021 followed by a panel of recent award recipients. Awardees will share their experiences choosing a NIFA program, crafting and submitting their applications, and managing their award. There will be plenty of opportunity for engaging conversation and Q&A. Learn more and register on NIFA's website.

NIFA Reporting Web Conference - Reporting Web Conference Series

December 10, at 2 p.m. ET

The Reporting Web Conference Series is a bi-monthly series run by the NIFA Planning Accountability and Reporting Staff, which seeks to foster consistent, quality communication between NIFA leadership and its partners, including the Land-Grant University (LGU) system. During the conferences, NIFA explains new or emerging reporting policies and procedures and gives grantees and administrators/business offices at the LGUs an opportunity to participate in real-time Q&A sessions. Learn more and register on NIFA's website.

Award Announcements

NIFA Invests $6.7 Million to Ensure Sustainable and Healthy Food Supply

NIFA recently awarded 16 Novel Food and Innovative Manufacturing Technologies grants to improve the safety, quality, shelf-life, and convenience of foods and food ingredients. NIFA support enables scientists to develop innovative and advanced manufacturing technologies that improve food quality and/or nutritional value of food and food ingredients that are more energy, water and resource efficient. These grants are part of NIFA's Agriculture and Food Research Initiative.

Funding Opportunity

Agriculture and Food Research Initiative - Sustainable Agricultural Systems

Image of tractor in field, courtesy of Getty Images.

Applications to the Agriculture and Food Research Initiative - Sustainable Agricultural Systems program focuses on approaches that promote transformational changes in the U.S. food and agriculture system. NIFA seeks creative and visionary applications that take a systems approach for projects focused on the themes in the USDA Science Blueprint:

- Sustainable agricultural intensification
- Agricultural climate adaptation
- Value-added innovation
- Food and nutrition translation

These projects are expected to significantly improve the supply of affordable, safe, nutritious, and accessible agricultural products, while fostering economic development and rural prosperity in America. These approaches must demonstrate current needs and anticipate future social, cultural, behavioral, economic, health, and environmental impacts. For more information, read the AFRI SAS funding opportunity.

Tweet of the Week

NIFA @USDA_NIFA · Nov 13

A Washington State U & Oregon State U research team, co-led by WSU horticulturalist Lisa DeVetter, is helping to modernize #blueberry pollination. Supported by a 4-yr, $2M grant from @USDA_NIFA's Specialty Crop Research Initiative. news.cahnrs.wsu.edu/article/wsu-or...

NIFA's mission is to invest in and advance agricultural research, education, and extension that solve societal challenges. NIFA's investments in transformative science directly support the long-term prosperity and global preeminence of U.S. agriculture. Keep informed about NIFA, USDA, our land-grant and non-land-grant university partners, and stakeholders with the NIFA Update. Read past issues online, sign up for email updates or follow us on Twitter @USDA_NIFA, #NIFAImpacts or LinkedIn @usda-nifa.

If you wish to submit a news item or information, send an email to **NIFAUpdate**.

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