

Friday Notes



March 15, 2024



Celebrating St. Patrick's Day with a Toast to Hop Production

Happy St. Patrick's Day! As we gear up to celebrate this festive occasion on Sunday, March 17, many of us will raise a glass of beer to honor the day. But have you ever stopped to think about what goes into producing that beer? One crucial ingredient is hops, the flowers of *Humulus lupulus*, which play a vital role in imparting bitterness, flavor, and aroma to beer, balancing the sweetness of malt and preserving the brew's longevity.

The cultivation of hops requires specific climatic conditions, making notable production regions in various parts of the world, including the Pacific Northwest of the United States, Germany, and the Czech Republic. The United States is the [world's largest hop-producing country](#), with Washington State alone producing over 69% of all hops grown in the US.

Americans have a [long history of hop cultivation](#), dating back to early colonial times. The first commercial hop production in the United States was established in 1648 to supply a brewery in the Massachusetts Bay settlement. Over the years, hop production shifted to the Pacific coastal states of Washington, Oregon, and California, where the climate, fertile soils, and plentiful irrigation water have resulted in excellent quality and yields.

Today, the growth of the craft beer industry has led to a resurgence of hop growing in various regions throughout the United States and new hop production areas. These farms, while generally smaller in scale than their Pacific Northwest counterparts, can respond to specific local hop market needs.

As we celebrate St. Patrick's Day and enjoy our favorite beers, let's raise a glass to the farmers who work hard to cultivate the hops that make our beer taste delicious. Cheers to hop production and the role it plays in our brewing traditions!

Continuing CAST's celebration of **Women's History Month**, our third article features **Sue Sullivan Twilley**, Ph.D., the first female CAST President (1997-1998). It highlights the influence of mentors and the importance of communication and interpersonal skills in achieving success.



**Sue Sullivan Twilley,
Ph.D.**

From Small-Town Roots to Corporate Success: A Journey in Plant Breeding

I grew up in a small Missouri town. My father was a county Agricultural extension agent, and I've always been interested in science. I liked plants better than animals as research subjects. While in grad school and working at the Univ. of Delaware, I was fortunate to get to know and interact with many well-known plant breeders in various universities, who served as mentors for me. Because of this, when I was offered a position to go into commercial corn breeding, it was an easy decision.

I honestly don't feel I ever had challenges BECAUSE I was a woman; it was just the challenges of doing the job and being the best I could be. I did experience the impacts of corporate downsizing once and was laid off. However, I was rehired a year later for the Hawaii R&D Manager position. All in all, everything worked together for the best, and I really had a great career.

I was honored to be an invited speaker at the Corn and Sorghum Seed Research Conference of the American Seed Trade Association once (I can't remember the year!). I also spoke at several corporate annual or regional meetings. However, this wasn't something I really enjoyed, so it's not a big part of my overall career.

Of course, having the basic knowledge and expertise in ones chosen field of study/work is fundamental. Equally important is developing communication and interpersonal skills to work successfully with colleagues and customers/ clients. By this and being open to new areas of opportunity, one can make wise choices and advance over time.

A person rarely ends up at what they initially started off to do. Looking back, one often finds that it's because of wise decisions in choosing various opportunities and pathways that one's final status and goals are reached.

Upcoming Events

April 3

Join the [2024 Abner W. Womack Missouri Agriculture Outlook Conference](#) on April 3, where the University of Missouri's Food and Agricultural Policy Research Institute (FAPRI-MU) will unveil its baseline outlooks for ag production, farm prices, and consumption for the next ten years. Former U.S. Sen. Roy Blunt will be the keynote luncheon speaker.

April 15-17

Register now for the [AI in Agriculture and Natural Resources](#) conference, April 15-17, 2024, at The A&M Hotel & Conference Center. The conference aims to foster the advancement of AI technology for sustainable agriculture and collaboration among university faculty, students, industry professionals, and stakeholders.

News and Views

USDA: The USDA (1) releases a chart showing [migration to urban and rural areas](#) pre- and post-pandemic, (2) announces \$40.5 million in grant awards to support the processing and promotion of [domestic organic products](#), and (3) releases a report showing the [demographics of farms](#) being lost and those that are growing.


CAST News

PAPER RELEASE

APPLICATIONS, BENEFITS, AND CHALLENGES OF GENOME EDITED CROPS

Wednesday, March 20, 2024
10:30 AM – 1:30 PM CST
The Danforth Center – St. Louis, MO

[REGISTER NOW](#)



Panelists Announced for the Paper Rollout of "Applications, Benefits, and Challenges of Genome Edited Crops"

Join us on Wednesday, **March 20, from 10:30 AM to 1:30 PM CST** at the Donald Danforth Plant Science Center in St. Louis, MO, for the rollout of the CAST issue paper "**Applications, Benefits, and Challenges of Genome Edited Crops.**"

Sarah Evanega, Okanagan Specialty Fruit, Cornell University, and 2021 Borlaug CAST Communication Award (BCCA) recipient will present. The full list of panelists includes:

- David Bubeck - Research Director, Corteva Agriscience
- Bernadette Juarez - Deputy Administrator, Biotechnology Regulatory Services, USDA-APHIS
- Luis Maas - Senior Station Manager/R&D Manager, Enza Zaden
- Jennifer Rowland - Biotechnology Coordinator, USDA

About the Paper

This paper provides a comprehensive overview of gene editing in agriculture, discussing its potential impact on producers, consumers, and the environment.

Student Activities

In addition to the paper rollout, we have planned **special activities for college students**, including a tour of the Donald Danforth Plant Science Center facilities, a session to explore opportunities for student engagement with CAST, and networking time with researchers, experts, and industry leaders.

Details

When

Mar 20, 2024 - 10:30 AM to 1:30 PM CST

Where

Donald Danforth Plant Science Center
St. Louis, MO

Program

10:30 AM – 12 PM CST - Presentation, Q&A, Panel Discussion

12 – 1:30 PM CST - Light Lunch and Networking

1:30 – 3 PM CST - Student Activities

**There will be a webinar release of the paper on April 3—more details soon.*

This is a FREE event. Registration is required.

Register Now



New Issue Paper Release: "Preventing the Next Invasive Plant: Opportunities and Challenges"

CAST is pleased to announce the early release of our latest issue paper, "**Preventing the Next Invasive Plant: Opportunities and Challenges.**"

This paper delves into the critical topic of invasive plant species management, focusing on risk assessment methodologies, their applications, associated benefits, costs, and the future trajectory of invasive plant species management. It provides valuable insights and recommendations for policymakers, researchers, industry professionals, and stakeholders involved in invasive species management.

□ [Early Access for CAST Members and Friday Notes Subscribers](#) □

As a valued member of CAST and a subscriber to Friday Notes, you have early access to the publication. Click the button below to read the full paper and stay informed about the latest developments in invasive species management.

DOWNLOAD NOW

More About The Paper

This paper emphasizes the urgent need for effective strategies to prevent the introduction of new invasive plant species. The most effective and economical management tactic is prevention, as managing established invasive species is expensive and challenging. However, predicting which species will become invasive is challenging, and existing tools, such as weed risk assessments, have limitations.

The paper also highlights the lack of coordination among state and federal agencies in invasive plant prevention, leading to a patchwork of approaches and missed opportunities.

The aim of the paper is to stimulate discussions and actions to improve invasive plant prevention strategies through better coordination, development of new tools, and policy enhancements.

Chairs

- Deah Lieurance, Assistant Professor of Invasive Species Biology and Management at Penn State University
- Theresa Culley, Professor of Plant Ecology at the University of Cincinnati

Authors

- Mark Brand, Professor, University of Connecticut

- Susan Canavan, Postdoctoral Researcher, University of Galway
- Curtis Daehler, Professor, University of Hawaii
- Christopher Evans, Forestry Extension and Research Specialist, University of Illinois
- Reuben Keller, Professor, Loyola University Chicago



CAST WEBINAR SERIES ON
FIFRA AND ESA

TOPIC:
**State Regulatory Agencies as Conduit for Informing
Local Conditions in Federal Pesticide Processes**

CAST #6

CAST

The banner features a dark blue background with white and purple text. On the right, there are icons for a video camera, a plus sign, and a laptop, along with a purple circle containing the number 6 and the CAST logo.

Thank you to everyone who participated in our webinar, "State Regulatory Agencies as Conduit for Informing Local Conditions in Federal Pesticide Processes," the sixth and last webinar of the six-part series on FIFRA-ESA.

The **video recording**, **slides**, and **paper** are now available for those who couldn't attend!

Stay tuned for the full release of all six papers in the series on **April 17**. They will provide a comprehensive overview of FIFRA and ESA's impact on agricultural resources and the environment. More details will be announced soon!

[Access the Resources](#)

Upcoming Papers

March 20 [In-person rollout in St. Louis, MO]
Applications, Benefits, and Challenges of Genome Edited Crops

April 17 [In-person rollout in Washington, DC]
Full release of all six papers in the FIFRA-ESA series

May 15 [In-person rollout in Ames, IA]
Soil Health and the Hydrologic Cycle

Upcoming Webinars

April 3
Applications, Benefits, and Challenges of Genome Edited Crops



NEW CAST PAPER

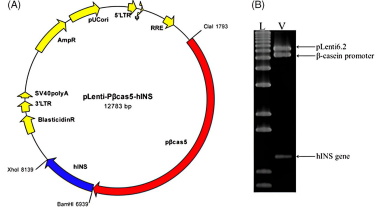
**RNA INTERFERENCE IN AGRICULTURE:
METHODS, APPLICATIONS, AND GOVERNANCE**

GET YOUR COPY NOW!

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CAST.ORG/PUBLICATIONS

The banner has a dark blue background with orange and white text. On the right, there is a blue vertical bar with white text and the CAST logo, and a red circle with a white DNA helix icon.

Animal Agriculture and Environmental News



Transgenic Cow Produces Human Insulin in Milk

A University of Illinois study paves the way for cost-effective and efficient insulin production, offering hope to millions with diabetes.

[Read More](#)



Aquaculture, the Sustainable Solution to Overfishing

Responsible fish farming practices are not only helping to protect oceans' delicate ecosystems but also providing a viable solution to feeding a growing global population.

[Read More](#)



Pork Industry Enhances Swine Traceability at National Forum

U.S. pork producers approve a resolution to strengthen the live swine traceability system, safeguarding against foreign animal diseases.

[Read More](#)

Food Science and Safety News



FDA Approves Yogurt Companies to Claim Products Lower Type 2 Diabetes Risk

Danone North America, the producer of Oikos, Activia, and Two Good, among others, can now advertise the potential health benefit, but with limitations and caveats advised by the FDA.

[Read More](#)



Florida House Passes Bill Banning Sale of Lab-Grown Meat

The legislation, supported by the state's agriculture industry, aims to ensure the safety of cultivated meat despite federal approval.

[Read More](#)

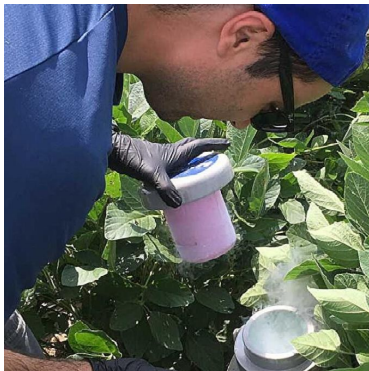


USDA Finalizes Voluntary "Product of USA" Label Claim to Enhance Consumer Protection

USDA invests in the resiliency of the meat and poultry supply chain and announces actions to improve seed industry transparency and competition.

[Read More](#)

Plant Agriculture and Environmental News



Crushed Rock Boosts Carbon Removal and Crop Yields, Field Trials Reveal

Enhanced weathering can remove CO₂ and improve maize and soybean yields in the U.S. corn belt.

[Read More](#)



Revealing the Secrets of Soil Organic Matter for Soil Health and Carbon Storage

Research from the Chinese Academy of Sciences reveals how soil temperature, moisture, and external inputs affect soil health and carbon storage.



Seed Technology and Evolving Farming Practices Triumph Over Drought's Grip

Smart farming practices and genetic advancements are producing remarkable crop success in challenging conditions.

[Read More](#)

[Read More](#)



CAST Paper Alert

CAST will release the paper "Soil Health and the Hydrologic Cycle" on May 15 during an in-person event in Ames, IA. More details will be announced soon.

International News



China's Wheat Cancellations Shake U.S. Markets

China canceled a record-breaking 504,000 tons of U.S. wheat shipments, leading to a 2.7% drop in wheat futures. Traders may scramble to cover their short positions, adding uncertainty to an already volatile market.

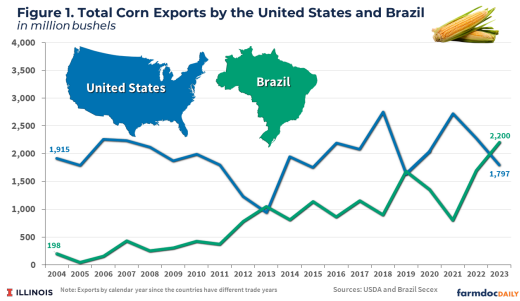
[Read More](#)



Canada Invests Over \$1.6M in Foreign Animal Disease Prevention

Animal Health Canada is receiving government funding to coordinate with industry and partners to prevent and prepare for African swine fever and foot and mouth disease.

[Read More](#)



U.S. Losing Ground in Global Corn Exports to Brazil's Surging Competition

Brazil's rise in corn exports challenges U.S. dominance, fueled by increased production, improved logistics, and strategic trade agreements.

[Read More](#)

General Interest

U.S. Tractor Sales Dip 7%, Combine Sales Plunge 32% in February 2024



An Association of Equipment Manufacturers' (AEM) report highlights the decline in agricultural equipment sales for February 2024.

[Read More](#)



Record Warmth Marks U.S. Winter Amid Climate Crisis

This winter in the mainland United States was the warmest ever recorded, highlighting the ongoing impact of the climate crisis as temperatures rise above historical averages.

[Read More](#)



Pork Producers Navigate California's Prop 12, Lobbying Continues

Despite initial opposition, some companies are adapting to new standards while others continue legal and legislative challenges.

[Read More](#)

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CAST [welcomes ideas](#) for future publications and projects.

Send your thoughts and stories for Friday Notes to fridaynotes@cast-science.org

Credits

Crushed rocks story photo by Ilsa Kantola, UIUC.

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Purpose

Friday Notes is designed to enhance communication among various agricultural sectors, educators,

students, and the public who are interested in a variety of plant, animal, food, and environmental issues. *Friday Notes* advocates the pursuit of credible, unbiased, science-based information. Material contained in linked articles is from the original authors and does not necessarily reflect the views of CAST.

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