



*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.

## In This Issue....

[Animal Agriculture News](#)  
[Food Science & Safety News](#)  
[Plant & Environmental News](#)  
[International News](#)  
[General Interest News](#)

## Announcements

The National Science Foundation has announced over \$27 million in funding for 12 convergent research projects, including [CAST member universities](#).

---

## CAST Social Media

[Visit our website](#)



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

**August 18, 2023**

## August is National Water Quality Month

Fresh water is the most important element to human health and our society. August is dedicated to raising awareness about the relatively small amount of fresh water available on Earth today.

Without fresh water, our lives would look very different, making the fight for good healthy water essential for a healthy future.



[National Water Quality Month](#) is the product of two congressional bills focused on water quality. The [Clean Water Act](#) of 1972 and the Safe Drinking Water Act of 1974 opened doors for essential conversations about water quality that are still relevant today. This legislation also paved the way for new technological innovations in water quality.

In collaboration with the Pritzker School of Molecular Engineering at the University of Chicago and the University of Wisconsin — Milwaukee, a new study by the U.S. Department of Energy's Argonne National Laboratory developed [sensors capable of simultaneously detecting lead, mercury, and E. coli in flowing tap water](#). The sensors offer high sensitivity and reliability that could help avert public health issues by enabling rapid and accurate contamination assessment.

An upcoming paper from CAST, "Precision Irrigation Management Technologies," will underscore the significance of irrigation in modern food production, showcase innovative approaches to optimizing water usage, and examine the environmental implications of employing precision irrigation management technologies.

**News and Views**

**USDA Updates:** The USDA (1) released U.S. and world agricultural [supply and demand outlook and estimates](#) for 2023/24, (2) announced an investment of \$15 million in research and [extension learning experiences for undergraduates](#) through NIFA, and (3) is seeking public input on a proposal to [strengthen Horse Protection Act \(HPA\)](#) requirements.

**Op-Ed:** David Rosowsky (Kansas State University) and Peter Dorhout (Iowa State University) discuss the [need for infrastructure upgrades](#) at leading agriculture research universities in the U.S.

## Far Side of the Barn

**Invasive crab:** [Italy will spend \\$3.2 million to stop the spread of an invasive crab species](#) threatening the country's production of clams.



## CAST Updates

### CAST Announces New Communications Manager



We are very excited to introduce our new Communications Manager, Carlos Back Vianna! Carlos comes to us with an impressive background in team management and strategic communication that will greatly benefit our organization, staff, and members. He has served as a communications specialist, communications manager, and head of communications for Insider2, Ana Mota Comunicação, and the Festival de Cinema de Gramado, respectively, and is currently pursuing his Ph.D. in journalism at the University of Colorado-Boulder.

Carlos will take the lead on evaluating, planning, and implementing all of CAST's communication efforts. Part of that overall plan will include developing new communication channels, such as videos and podcasts, and expanding on CAST's current methods, helping us reach and engage a broader, more diverse audience.

"I am incredibly grateful for the opportunity to work with CAST," says Carlos. "As a journalist, I deeply believe in CAST's mission to provide unbiased, science-based information, especially in today's world, where accurate information has become critical to sustainable human development. I am dedicated to communicating CAST's invaluable work, amplifying its impact, and contributing to projects that push the boundaries of effective science communication."

As always, we appreciate hearing from our CAST members with possible contributions for our Friday Notes newsletter and social media platforms. So please reach out to him directly with highlights, updates, and events at [cvianna@cast-science.org](mailto:cvianna@cast-science.org).

**WELCOME CARLOS!**

# Animal Agriculture and Environmental News

**Coronavirus:** New studies provide insight into how coronavirus is [transmitted between species](#), allowing scientists to stay ahead of future pandemics.

**Regulations:** EPA [rejects pleas to toughen regulations](#) on large farms after many environmental concerns regarding water quality.

**Pork:** [Gene-editing technology in pigs](#) takes the stage as scientists seek more efficient production to feed future populations.



**Sensors:** Scientists are developing [sensors to detect salmonella and other pathogens](#) across the supply chain.

## Food Science and Safety News

**Plant Protein:** Scientists revolutionize plant protein, [making it more palatable for consumers](#).

**Watermelon:** [Researchers constructed a 'super-pangenome' for watermelon](#) and its wild relatives seeking potential disease resistance and increased fruit quality in the future.

**Fish:** [3-D printed seafood could be the future](#) on concerns of unsustainable fishing practices.



**Labels:** New research shows that [font size can help direct consumers](#) toward healthier choices in the grocery store.

## Plant Agriculture and Environmental News

**Hornets:** Georgia officials alerted to the [potential damage in agriculture caused by yellow-legged hornets](#), an invasive species spotted for the first time in the U.S. earlier this month.

**Soybean:** Dartmouth scientists weigh the [benefits of increasing irrigation across corn and soybean crops](#) as climates change across the United States.

**Water:** Researchers have found that plant [water efficiency has stalled since 2001](#), impacting carbon cycling, agricultural production, and water resources.



**Climate Change:** Amid climate change, research shows that [new ecosystems emerge](#) as glaciers disappear.

## International News

**Yemen:** A potential [environmental disaster looms off the coast of Yemen](#) as a shipping tanker rusts

away amid civil war.

**China:** Floods have [damaged corn and rice crops in China's northern grain-producing belt](#), triggering food inflation worries.

**India:** India [imposes a ban on exported corn](#) to strengthen domestic supplies and the economy.



**Mexico:** The United States will escalate its complaint that [Mexico's ban on genetically modified corn violates the US-Mexico-Canada free-trade deal](#).

## General Interest

**Water:** Scientists and officials are concerned about [how much water is left in the Colorado River](#).

**Rangeland:** The Society for Range Management released a [report defining and outlining considerations about rangeland ecosystem services](#), including food and fiber, water, carbon, biodiversity, and wildlife.

**Wildfire:** Scientists have long warned about the [potential fire risks of invasive grass](#) in Maui.



**Water Levels:** Lake Mead sees a significant [rise in water levels after recording low years](#) in the height of a drought.

## Photo Credits

Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service, Constant Contact, or CAST.

Lake Mead photo from Caiti Steele, USDA Southwest Climate Hub

## Societies, Companies, and Nonprofit Organizations Serving on the CAST Board of Representatives

- \* Agricultural & Applied Economics Association
- \* American Association of Avian Pathologists
- \* American Association of Bovine Practitioners
- \* American Bar Association, Section of Environment, Energy, & Resources-Agricultural Management
- \* American Dairy Science Association
- \* American Farm Bureau Federation
- \* American Meat Science Association
- \* American Meteorological Society, Committee on Agricultural and Forest Meteorology
- \* American Seed Trade Association
- \* American Society of Agricultural and Biological Engineers
- \* American Society of Agronomy
- \* American Society of Animal Science
- \* American Society of Plant Biologists

- \* Minor Use Foundation, Inc.
- \* Mississippi State University
- \* National Cattlemen's Beef Association, a Contractor to the Beef Checkoff
- \* National Corn Growers Association/Iowa Corn Promotion Board
- \* National Milk Producers Federation
- \* National Pork Board
- \* National Turkey Federation
- \* North Central Weed Science Society
- \* Northeastern Weed Science Society
- \* Nutrients
- \* Penn State University
- \* Poultry Science Association
- \* Rural Sociological Society
- \* Society for In Vitro Biology



- \* American Veterinary Medical Association
- \* Association of Equipment Manufacturers
- \* Aquatic Plant Management Society
- \* BASF Corporation
- \* Bayer Crop Science
- \* Corteva Agriscience
- \* CropLife America
- \* Crop Science Society of America
- \* Global Teach Ag Network
- \* Innovation Center for U.S. Dairy
- \* Iowa State University

- \* Society for Range Management
- \* Soil Science Society of America
- \* Syngenta Crop Protection
- \* The Fertilizer Institute
- \* The Mosaic Company
- \* Tuskegee University
- \* United Soybean Board
- \* University of Nevada-Reno
- \* U.S. Poultry and Egg Association
- \* Weed Science Society of America
- \* Western Society of Weed Science

*CAST, through its network of experts, assembles, interprets, and communicates credible, balanced, science-based information to policymakers, the media, the private sector, and the public.*

## Members of CAST's Education Program

- \* Cornell University
- \* Iowa State University
- \* Kansas State University
- \* Mississippi State University
- \* North Carolina Agricultural and Technical State University
- \* North Carolina State University
- \* Penn State University
- \* Purdue University Libraries and School of Information Studies
- \* Texas A&M University College of Ag & Life Sciences
- \* The Ohio State University
- \* Tuskegee University

- \* University of Arkansas System Division of Agriculture
- \* University of California-Davis
- \* University of Florida Institute of Food and Agricultural Sciences
- \* University of Georgia
- \* University of Illinois College of Agricultural, Consumer and Environmental Sciences
- \* University of Kentucky
- \* University of Missouri-Columbia
- \* University of Nebraska Agricultural Research Division
- \* University of Nevada-Reno College of Agriculture, Biotechnology and Natural Resources

### Contact CAST:

cast@cast-science.org

The Council for Agricultural Science and Technology

4420 West Lincoln Way

Ames, Iowa 50014-3447

Phone: 515-292-2125



The Science Source for Food,  
Agricultural, and Environmental Issues

*CAST provides Friday Notes as a benefit to its members. Please do not forward, edit, copy, or distribute the Notes in any form to nonmembers without the express permission of the CAST CEO/EVP Chris Boomsma (cboomsma@cast-science.org). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits. Contact Colleen Hamilton at 515-292-2125 or [chamilton@cast-science.org](mailto:chamilton@cast-science.org), or [CLICK HERE](#) for CAST membership information. For media inquiries, please contact our Communications Manager, Carlos Vianna, at [cvianna@cast-science.org](mailto:cvianna@cast-science.org) or 515-292-2125 ext 222.*

**Council for Agricultural Science and Technology**

[\[www.cast-science.org\]](http://www.cast-science.org)

