



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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Announcements



Eastern England provided a classic setting for the recent [Harvest Moon](#).

The [National Agri-Marketing Association](#) is hosting its Fall Conference in St. Louis, Missouri, on October 4-6.

North Carolina State University's [Plant Breeding Consortium](#) announced its second virtual seminar series in International Plant Breeding—beginning September 30.

Check here for information about the [2021 Borlaug Dialogue Agenda](#) in October.

CAST College Corner

[Tuskegee University](#) and the University of Georgia received a USDA grant to improve veterinary education and research across Africa through the Faculty Exchange Program.

The [University of Florida](#) is involved with recruiting and retaining traditionally underrepresented students in artificial intelligence education

September 24, 2021

Technology Continues to Take Root and Blossom

With eyes-in-the-sky, driverless tractors, and tiny super computers, agriculture is adopting new technology that indicates the future is now. As [this CAST Issue Paper explains, highly automated systems are employed](#) in crop and



animal industries to enhance agricultural efficiency. [Ground and aerial robots combined with artificial intelligence techniques](#) are employed to tackle rising food, fiber, and fuel demands. Stories throughout Friday Notes demonstrate the influence of high tech on the entire field-to-fork process. The following links are a few examples: 1) At the new [AI Institute for Resilient Agriculture](#), researchers will [use artificial intelligence tools](#) to help plant breeders improve crop varieties and production, 2) University of Florida [cattle scientists are using AI](#) to improve the quality and quantity of meat and dairy, 3) this podcast explores [drone technology and farming](#), 4) a North Carolina A&T State University team uses [drones to inspect the state's bridges](#), and 5) the University of Nevada-Reno is developing [virtual GPS fencing](#) for cattle and range management.

News and Views

USDA at the UN: At the UN Food Systems Summit, the USDA highlighted its [investments and actions taken to lessen hunger and malnutrition](#)—and to build more sustainable, resilient, and inclusive food systems.

USDA Update: The department unveiled a resource guide to [help people in rural and Tribal communities](#)

Productivity and the Climate: Saying production does not need to suffer from utilizing climate-smart practices, Ag Secretary Vilsack is encouraging other nations to join the United States in a [coalition for productivity growth](#).

Water Rule: The EPA is [working on a water rule](#) that—officials hope—will stand the test of time.

Cyberattacks: A [grain co-op was hit by a cyberattack](#), and some

and research.

The [Texas A&M](#) Diversity in Entomology Project hopes to address recruitment and support deficiencies for underrepresented students.

[Mississippi State University](#) scientists used a huge crop design of the school's spirit symbol to help them refine precision planting research.

CAST Social Media

Visit our website



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

worry the [food supply chain](#) could be at risk.

Far Side of the Barn

Animal Celebrities

(video): These twenty famous or notorious animals had their time in the spotlight—from a dog elected mayor to Yvonne the runaway cow to the outrageous honey badger.



Furry Skydivers (video):

This new look at [why beavers were parachuted into the Idaho wilderness](#) 73 years ago revives the fantastic story of the airborne mammals.

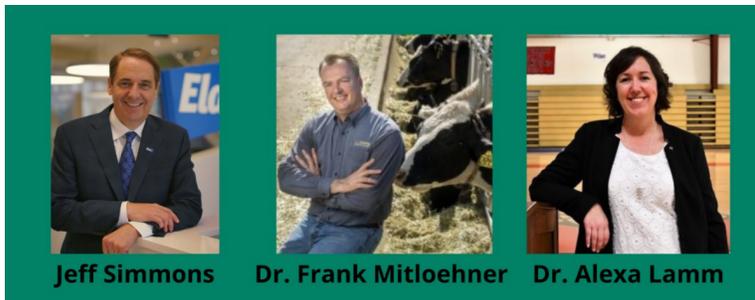
Sea Otter Spotlight (videos): As a very bad punster said, "Things are [getting otter control at the oyster bar](#)." By the way, it's [Sea Otter Awareness Week](#).

CAST Updates

The Continuing Impact of BCCA Recipients

Jeff Simmons ([2013 BCCA recipient](#)) has [an opinion piece](#) titled *Climate change and hunger: can animals be the game-changer?*

Dr. Frank Mitloehner ([2019 BCCA recipient](#)) and Sara E. Place released a [new white paper](#) that makes the case for focusing on warming impacts in the cattle sectors.



Dr. Alexa Lamm ([2020 BCCA recipient](#)) and three other co-authors released an article titled *Predicting Intent to Conserve Freshwater Resources Using the Theory of Planned Behavior*. The [purpose of the study](#) was to determine if political affiliation, political ideology, and theory of planned behavior variables related to water conservation predicted intent to engage in water conservation.

CAST Happenings



Dr. Nick Place

CAST would like to welcome Dr. Nick Place to the [Board of Trustees](#). Dr. Place serves as Dean of the University of Georgia College of Agricultural and Environmental Sciences and Director of the UGA Cooperative Extension and Agricultural Experiment Stations. Click [here to access](#) his University of Georgia site.

A year ago [CAST published a commentary](#) titled *The Importance of Communicating Empirically Based Science for Society*. On September 22, Dr. Stuart Smyth presented highlights of the paper in a webinar followed by Q&A with a panel of task force authors—Jon Entine, Ruth MacDonald, Cami Ryan, and Meghan Wulster-Radcliffe. The one year impact report, publication, Ag quickCAST, study guide, and webinar are all available on

the CAST website.

The [CAST Summary of Activities](#) for June-September is now available for viewing. It covers the President-Elect for 2021-22 announcement, the latest CAST Commentary, information about interactive student study guides focused on CAST publications, the newest board-level nonprofit member, new Board of Trustees members, and upcoming events.

Animal Agriculture and Environmental News

Swine Import Rule: The USDA [suspended the shipments of all swine](#) from Puerto Rico and the U.S. Virgin Islands to the mainland United States as part of an African swine fever protection zone.

Cattle and Methane: President Biden announced a [methane reduction effort](#), and the NCBA says it is confident in the U.S. cattle environmental record.

Keratin Waste Solutions: Scientists have designed a technology that converts keratin waste such as [poultry feathers to fertilizers](#), pet food, and animal feed.

Pork's Wild Ride: This Pork Checkoff site features [information about hog markets](#), noting that the last 14 months have been a roller coaster.

Counting Sheep: The [American Lamb Board is using food influencers](#) to extend the reach of their marketing and educational programs. Meanwhile, a [pair of sheep in Texas](#) led animal care officers on a wild chase.



North Carolina State University researchers joined other scientists for a [study of dogs with moderate osteoarthritis](#) to develop a textile-based implant containing cartilage derived from stem cells that could restore hip joint function.

Food Science and Safety News

Fruits and Veggies: A bill introduced in Congress aims to increase and improve the USDA's [procurement of fresh fruits and vegetables](#).

Calorie Burn: The science of [how humans burn calories](#) could affect the understanding of chronic disease, aging, and obesity.

Obesity and Surgery: The World Health Organization says millions [die from obesity-related causes](#) annually. These Penn State researchers looked at [variables regarding patients and bariatric surgery](#) for obesity.

Processed Meat: British scientists developed processed red meat that includes natural substitutes to reduce the carcinogenic compound [nitrite added to preserve meats](#).

Hispanic Heritage Food: If you enjoy [chocolate, potatoes, or tomatoes](#), you have indigenous Latin American cultures to thank.



A Connecticut restaurant is taking an unorthodox approach to addressing staff shortages by [using robots to serve meals](#).

Plant Agriculture and Environmental News

Crops and Carbon: By creating crops that sequester more carbon, scientists hope [agriculture will help mitigate climate change](#). Also, Kansas State University researchers looked at the [potential value of carbon credits](#) for farmers.

Dicamba Use: The EPA says farmers will have [access to dicamba-related products](#) in 2022, but the agency is still analyzing its use.

Grain Exports after Ida: U.S. [grain exports increased](#) along the Louisiana Gulf Coast, but Hurricane Ida repercussions are still echoing.

Fueled by Soybeans: The price of soybean oil has been affected by a [boom in the renewable diesel industry](#).

Soybean Meal: This article explains how soybean meal has become a high quality and consistent [source of highly digestible amino acids](#)—and it provides energy.

Hungry, Hungry Caterpillar: From Georgia to Iowa, [armyworms are damaging lawns and certain crops](#). An Iowa State University expert provides insights.



Several ancient sequoias—the world's largest trees—received aluminum [blankets to help protect them](#) from a raging wildfire.

International News

Reefs in Trouble: New research tracks a 50% decline in [living coral since the 1950s](#).

Food Prices and Supply Chains: World [food prices surged](#) during the past year, with developing countries hit hardest.

China and Coal Plants: China says it will stop the construction of new [coal-fired power plants](#) abroad, but the country did not address plans about such plants at home.

Dolphin Controversy: The recent [slaughter of dolphins](#) on the Faroe Islands was part of a four-century-old tradition of killing the mammals for their meat and blubber.

Koala Concern: Australia has [lost nearly 30% of its koalas](#) during the past three years, with the marsupials hit by drought, bushfires, and developers cutting down trees.



This shot of boats in a Bangladesh waterway is one of the visually impressive [International Drone Photo Award winners](#).

General Interest News

Smelly Cat: Research has found that cats refuse to snuggle with objects that [smell like their owners](#).

Fighting COVID-19: This University of Arkansas researcher used [inexpensive supplies to build portable air filters](#) that help remove infectious airborne particles.

Controversial COVID-19 Treatment: The recent rush on equine ivermectin has made it difficult for [people who need to treat their horses](#) with the substance.

The Heat is On: The government launched a [strategy to combat extreme heat](#), including the development of new federal [labor standards aimed at protecting workers](#).

Farm Safety: This site gives suggestions for [protecting farmworkers and their families](#) from pesticide exposure, and the official EPA site provides many [links about agriculture laws and regulations](#).



This young biologist researches plants and also hosts “Real Time Science,” a series of [videos she uploads to TikTok and Instagram](#).

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- * American Seed Trade Association
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- * CropLife America
- * Crop Science Society of America
- * Innovation Center for U.S. Dairy
- * Bayer
- * 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
- * North Central Weed Science Society
- * Northeastern Weed Science Society
- * Poultry Science Association
- * Rural Sociological Society
- * Society for In Vitro Biology
- * Soil Science Society of America
- * Syngenta Crop Protection
- * The Fertilizer Institute
- * 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

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The Science Source for Food,
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