



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



Featuring midways, livestock barns, displays, and more, state fairs are underway. This [site lists its favorites](#), although all of them offer food and fun.

Check [here for information](#) about the [Ag Innovation Showcase](#), September 13-14, hosted by the Larta Institute and the North Carolina Biotechnology Center. [Sarah Evaneqa](#) (Cornell and [2021 BCCA](#)) will be one of the keynote speakers.

In light of pandemic conditions and health considerations, the [World Food Prize 2021 Norman E. Borlaug International Dialogue](#) will convert to a virtual format—October 19-22.

The [International Alliance for Phytobiomes Research](#) establishes a science and technology foundation for site-specific, phytobiome-based enhancement of the sustainable production of food, feed, and fiber. [Check here for a list of the organization's webinars.](#)

Presented by the Agricultural

August 20, 2021

Working on Solutions

The list of issues facing agriculture include everything from climate extremes to supply chain issues, but problem solvers continue to forge ahead. CAST members and associates include innovators working with universities, societies, companies, and nonprofit organizations. Friday Notes and CAST's social media outlets feature many problem-solving endeavors from members, associates, and forward-thinking groups. These three projects symbolize those efforts: 1) The National Cattlemen's Beef Association wants to demonstrate the sector's ability to [achieve net-zero greenhouse gas production in less than 20 years](#), and the organization emphasizes the importance of producer involvement in the process. 2) "Solutions from the Land" is [helping innovative and entrepreneurial farmers, ranchers, and foresters](#) produce nutritious food, feed, fiber, clean energy, healthy ecosystems, quality livelihoods, and strong rural economies. 3) The UC Davis "[Smart Farm Big Idea](#)" program seeks to develop smarter farming and food system solutions to meet the pressing challenges facing agriculture.



News and Views

USDA Updates: In recent activity, the department 1) released a [re-evaluation of the Thrifty Food Plan](#), used to calculate SNAP benefits, 2) announced the implementation of pay initiatives to recognize and [support federal wildland firefighters](#), 3) is investing to build infrastructure to expand the [availability of higher-blend renewable biofuels](#), and 4) has announced [improvements to the Dairy Safety Net](#) and New Pandemic Market Volatility Assistance Program.

Big Dry: Federal officials announced the first ever [mandatory water cuts to the Colorado River](#), a system that serves 40 million people. Meanwhile, drought conditions [worsen in the High Plains and upper Midwest](#), affecting crops and livestock.

Chlorpyrifos Ban: The Biden administration announced a ban on the use of the [widely used pesticide chlorpyrifos](#), saying it poses risks to children and farm workers. The Agricultural Retailers Association [disagrees with the decision](#).

Business Council of Kansas City and Agri-Pulse Communications, the [2021 Ag Outlook Forum](#) will be held in downtown Kansas City on September 20.

CAST College Corner

[North Carolina A&T State University](#) received an EPA grant to research children's chemical exposures from soil and dust ingestion.

The [University of Kentucky](#) was selected as a site for a trial to assess dose levels of a Johnson & Johnson booster shot.

The [University of Arkansas](#) received a grant from the National Science Foundation to establish a research institute focused on virology and virus ecology.

CAST Social Media

Visit our website



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

Water Rule: Some farm groups weighed in on the EPA's process for a [new water rule under the Clean Water Act](#)

Pandemic Updates: This article looks at [COVID vaccination rates in rural and metropolitan counties](#), and this story explains how scientists used an adaptation of [CRISPR to develop a peptide display platform](#) that can be used as a tool to identify antibodies in patient blood samples.

Far Side of the Barn

Snake Sighting in Spice Aisle (video): An Australian woman was greeted by a [10-foot long python in the grocery aisle](#), but she calmly helped bag and rescue the reptile.



Music and Farming (video): The Peterson Brothers are as active as ever, running a ["Family Farm vlog channel"](#) that looks at farm operations, and still composing [parodies like "Highway to Sell!"](#) a song taken from a well-known AC/DC recording.

Darth Gator (video): A brave bystander leaped on top of an alligator to [save an animal trainer](#) who was being attacked.

CAST Updates

The National Veterinary Scholars Symposium Celebrates the Next Generation of Veterinarians

CAST Issue Paper

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Impact of Recruitment and Retention of Food Animal Veterinarians on the U.S. Food Supply



Abstract
Food animal veterinarians are a necessary part of our food systems. Many challenges exist and continue to emerge, including the impact of the COVID-19 pandemic on the food supply chain. This issue paper discusses the impact of recruitment and retention of food animal veterinarians on the U.S. food supply. The authors discuss the current state of the profession and provide recommendations for addressing the challenges ahead.

Nearly 900 veterinary students and leaders from three dozen veterinary schools in the U.S. convened virtually for the annual [National Veterinary Scholars Symposium](#). They learned from researchers, public health officials, and industry experts about the global burden of disease, infectious disease control, and potential pathways for research careers where their veterinary training and One Health perspective is critical. Hosted by Iowa State University, students from Mississippi State University, the University of Missouri, The Ohio State University, and Cornell University were among those given special recognition.

[Check here to access the CAST publication](#) *Impact of Recruitment and Retention of Food Animal Veterinarians on the U.S. Food Supply*.

Animal Agriculture and Environmental News

Poultry Best Practices: Hatchery and breeder professionals recently gathered in Nashville, Tennessee, for a two-day clinic to discuss best practices and [industry concerns in hatchery-breeder management](#).

Small Pigs, Big Potential: Pig researchers have been

working to understand the implications and challenges of the increasing number of [small pigs born in large litters](#).

Dairy Report: This report answers ten questions that are frequently asked about [exporting dairy products](#).

Cattle Chat: On a recent Kansas State University podcast, [veterinarians discussed two rare diseases](#) that can impact cattle—rabies and blackleg.

Horse Value: Horses add an estimated \$2 billion annually in [economic value to North Carolina](#).

Steer Show: The Iowa Governor's Charity Steer Show reached new heights, [raising \\$375,265.92 for the Ronald McDonald House Charities of Iowa](#) at the 39th annual show.



The Iowa State Fair featured the year's [biggest bull, ram, and boar](#)—although records show that the [biggest boar ever at the fair was Reggie \(above\), weighing in at 1,335 pounds](#).

Food Science and Safety News

GMO on the Menu (video): Alison Van Eenennaam (UC Davis and [2014 BCCA](#)) shares this 15-minute video about the [ingredients and presentation of an all-GMO meal](#).

Diet as Villain, Scapegoat, or Necessity? This scientist considers the way [the culture of weight loss](#) is perceived.

Ultraprocessing: Results from [two decades of data](#) show ultraprocessed foods have become a larger part of kids' and teens' diets.

Hard to Say Goodbye: Many think high levels of sugar are bad for health, and they say [cutting it out can be difficult](#)

Greens for Astronauts: This lettuce grower has spent years developing plants, and he hopes to have [his lettuce grown in space](#).

Pizza on the Grill: This foodie says the grill is one of the easiest ways to get [restaurant-quality pizza at home](#).



This article looks at [food delivery robots](#) coming back to university campuses this fall, and this video shows how Japanese [food companies are using robots](#).

Plant Agriculture and Environmental News

Updates about Organics: Scientists are working to introduce a better, more sustainable [mulch and weed blocker for organic farmers](#), and this article looks at the market for [organic products during the pandemic](#).

Trouble in the Fields: Superweeds—especially Palmer amaranth—continue to [evolve resistance to herbicides](#).

AI in the Vineyard: A USDA scientist says [artificial intelligence \(AI\) is helping develop grape varieties](#) that beat the damaging powdery mildew fungus.

Living with Fire Program: A University of Nevada-Reno podcast looks at [issues surrounding the West's wildfires](#).

Soil Carbon: This device helps smallholder farms measure the [amount of carbon in soil](#).

Soybean Riding High: This report says [high oleic soybean varieties](#) are showing up more often in fields across



Corn makes [impressive mazes](#) and cool [venues for baseball games](#), but the amazing plant is also a key for food production. See links about 1) past and present [corn hybrids](#), 2) Iowa State [corn-genome research](#), and 3) an [issue dealing with E15](#)

International News

Drought , War, and Hunger: As military hostilities rage, [Afghanistan suffers from a severe drought](#) that brings acute [malnutrition, especially for children.](#)

Buffalo Cheese (video): See how this dairy farm in Italy makes 11,000 pounds of fresh, creamy mozzarella cheese daily with the help of their [special water buffalo herd](#).

Water Woes: As much as a quarter of the world's population now faces water scarcity, and some are worried that [this will lead to global conflicts.](#)

Crop Improvements in Africa: As the Cornell Alliance for Science reports, [African scientists are using gene editing](#) to improve crops for increased productivity, enhanced nutrition, and climate resilience.

Digital Tech: Data from Asia and Africa suggests that digital technology holds promise to dramatically [enhance smallholder productivity and incomes.](#)



The island of [Bali](#) fights for its [beautiful beaches](#) by rethinking waste, especially plastics.

The EU Commission has [authorized ten GMO crops](#), including three maize and two soybean.

General Interest News

Future Machines, Now: Agricultural equipment manufacturers are developing [electric and autonomous machines](#), but they have problems to solve.

EV Technology: Electric vehicle technology is [making strides in heavy machinery](#), thanks to battery breakthroughs.

TractorCloud: Cal Poly students are behind TractorCloud, a startup [developing technology to help](#) heavy machinery operators and agricultural managers.

De-extinction Club: Futuristic technology means we may soon be able to bring back species from the past including [mammoths, Tasmanian tigers, and dinosaurs.](#)

Ag Labor and Tech: Artificial [intelligence and automation are the new farmhands](#) as growers try to boost productivity amid soaring global demand for agricultural products.

Bats Making Choices: A new study has found that fruit-eating bats are more like humans when it comes to making a [decision among three choices.](#)



North Carolina State University researchers created insecticide-free, [mosquito-resistant clothing](#) using textile materials they call "bite-proof."

Photo Credits

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- * American Farm Bureau Federation
- * American Meat Science Association
- * American Meteorological Society, Committee on Agricultural and Forest Meteorology
- * American Seed Trade Association
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- * American Society of Agronomy
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- * 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,
Agricultural, and Environmental Issues

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