



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](#)
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Announcements



As this website demonstrates, NASA [scientific exploration expands humanity's reach](#) into the cosmos and provides benefits to us on Earth.

On June 8, join the [National Academies of Sciences, Engineering, and Medicine](#) to hear from scientists who measure groundwater supplies and organizations that address water scarcity issues.

The [American Association of Veterinary Medical Colleges](#) welcomes faculty and students to submit proposals for the Catalyze 2022 Conference, March 3-5, 2022, in Washington, D.C.

The Borlaug Dialogue gathers hundreds of people from more than 65 countries to address cutting-edge issues related to global food security and nutrition.

The [2021 International Borlaug Dialogue—October 20-22](#)—will be offered in a hybrid format.

Note: Constant Contact and Microsoft Outlook are working with email security settings, and some incoming email messages can be denied. If possible, to ensure the delivery of Friday Notes, please adjust the "safe

June 4, 2021

Food Supply Chain Challenges

The food supply chain runs as a well-oiled machine until a wrench gets thrown into the works, and the past year has added some new flak to the challenges. A [CAST Commentary \(Economic Impacts of COVID-19 on Food and Agricultural Markets\)](#)



examined the COVID monkey wrench; climate factors like drought are [affecting water](#) and therefore food supplies; the world's largest meat processing company has [resumed most production after a cyberattack](#) that exposed new vulnerabilities; and recent cyberattacks have led farm groups to request reviews of regulations for haulers of live animals and fresh meat products to [prevent any potential disruptions](#) to the supply chain. From farmers to grocers, thousands are working hard to protect a fragile but crucial food supply chain.

News and Views

USDA News: The USDA announced (1) the [Pandemic Cover Crop Program](#), (2) a report that the "[farmer share](#)" of the average U.S. food dollar increased slightly, (3) the start of the annual [Feds Feed Families campaign](#), and (4) the department's statement about the [ransomware attack against JBS](#), a major meat production company.

Carbon Farming: As the White House considers [paying farmers for sequestering carbon](#), some worry about how to measure the benefits and how to manage another subsidy.

States and Cybersecurity: The ransomware attack on the world's largest meatpacking company has Iowa, and many states, looking at [stronger cybersecurity in agriculture](#).

Economics: (1) Federal Reserve Bank [surveys—and explanatory charts](#)—show strength in the agricultural economy, (2) [world food prices rose](#) in May at the fastest monthly rate in more than a decade, and (3) demand for [pork and grains](#) is helping propel prices in 2021.

COVID-19 in Rural Areas: This [interactive map](#) looks at

sender list" in your server to accept "info@cast-science.org".

CAST College Corner

This [University of Nevada-Reno](#) site explains why the mission of land-grant universities is more important than ever.

[Texas A&M](#) specialists are developing a new way to assess wind turbine designs.

Researchers at the [University of Florida](#) are using a survey to gather perceptions of wildlife-friendly plant options.

Check throughout *Friday Notes* to see more featured articles from member universities.

CAST Social Media

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

infections and death rates in rural America.

CAST Paper and Webinar

CAST will roll out its new Commentary—*The Role of Agricultural Science and Technology in Climate 21 Project Implementation*—June 28 with a [webinar presentation June 29](#).

Far Side of the Barn

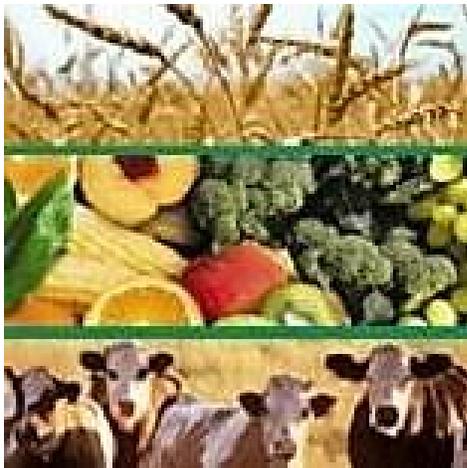
Mama Bear Versus Teen "Mama Bear" (video): A [17-year-old fought off a bear](#) to protect her dogs. Do NOT try this at home.



Hanging by a Thread: Jumping spiders use four pairs of big eyes to spot prey, and they [spend most of the night hanging by a thread](#), relying on vibrations to alert them of danger.

This Sheep Won't Baaack Down (video): Sheep dogs usually get all the glory, but this [headstrong lamb won't give in](#).

CAST Updates



Society Members Help Promote CAST Mission

Society members are a key component in the effort to fulfill CAST's mission—communicating credible, science-based information to a wide audience. [Society members include](#) those representing medicine, plants, food, animals, and other types of science and agriculture.

CAST's society members enjoy several benefits such as access to publications and a weekly newsletter. But just as notable, these groups share information with others through CAST's publications and social media, and their members keep aware of credible, science-based research and information from the many sources available through CAST.

Member societies have a voice on the [CAST Board of Representatives](#), a group made up of the member societies, universities, commercial companies, nonprofit or trade organizations, and the Board of Directors. Each member of the board serves on one of three work groups—Animal Agriculture and Environmental Issues, Food Science and Safety, or Plant Agriculture and Environmental Issues. The work groups meet at an annual board meeting, hold monthly conference calls, and serve the critical role of helping CAST identify, clarify, and prioritize national issues it should address in its publications to support the science, technology, and innovation of food and agriculture.

Animal Agriculture and Environmental News

Cattle Market at a Crossroads: This economist looks at the [rift between producers and packers](#), fueled by rising packer margins and declining cattle prices.

Correcting the Facts: Frank Mitloehner ([2019 BCCA](#) and UC Davis) gives an update about the way [livestock's role in greenhouse gas emissions](#) has been overstated.

Avian Influenza: A bird virus—H10N3—has shown up in Asia, but the FAO says there is [no indication of human-to-human transmission](#) at this time.

Real Experiences: Kansas State University officials say a [new swine facility](#) will give students practical experiences they will see in their future workplace.

Speed Issues: Producers are disappointed with the USDA's [decision to slow line speeds](#). An Iowa State University economist estimates a reduction in pork harvest capacity.

Kissing Chickens: A salmonella outbreak linked to backyard poultry has prompted U.S. health officials to issue a warning—[don't kiss or snuggle your ducks and chickens](#)

Insects and Swine: A June 17 webinar will look at the use of [insect-derived ingredients in swine production](#).



A large agriculture company will sell [methane-absorbing wearable devices for cows](#), as it hopes to help the industry cut greenhouse gas emissions.

An EPA study shows that U.S. [agriculture remains a small slice](#) of the greenhouse emissions pie at just 10.2% overall.

Food Science and Safety News

Food Safety: Infections from [antimicrobial-resistant strains of Salmonella](#) pose a serious threat. CDC research indicates these types of infections are on the rise.

Grocery Gains: The 20 top U.S. grocery [retailers continue to gain market share](#), according to a report from the USDA

Groceries on Demand: A successful European on-demand grocery delivery startup is [launching its operations in the United States](#)—promising service in ten minutes or less.

Milkin' It: U.S. dairy exports [reached a record in March](#), with the percentage of domestic milk production sent overseas the second highest ever.

Cookin' with Gas: This site features some of [America's favorite gas station indulgences](#)—from gobs in Pennsylvania to deep-fried burritos in Texas to Spam musubi in Hawaii.

Sustainable Eggs: An associate professor at Penn State University explains that [raising chickens with "regenerative agriculture"](#) could create a new premium category.



This professor and cookbook author has some things to say about "[the science of barbecue](#)"--meat thermometers, brining, lighter fluid, and more.

Plant Agriculture and Environmental News

Weed Control: This university professor points out factors that [affect herbicide use and weed control](#).

Tracking Nitrate: A UC Davis professor's research in a *Soil Science of America* publication looks at how to [track nitrate as it moves through farm fields](#).

Sustainable Soybean Oil: New uses for U.S. soy create [sustainable products](#) for consumers, and some companies are using soybean oil to replace petroleum.

High-oleic Soybeans: The Missouri Soybean Commercialization Council is promoting soylake, a product that can be used in [high oleic soybean oil and meals](#).

Reducing Soil Erosion: A study says [ARS scientists designed seven of the top ten](#) most used technologies that are reducing the loss of soil to erosion around the world.

Cotton and Weeds: A University of Arkansas expert [explains multiple herbicide options and application timings](#) for optimum weed control in the Enlist E3 cotton system.

Cold-weather Avocados: A Mississippi State University expert says [cold-hardy avocados might grow well](#) in zone 8.



Roadside beauty is also environmentally beneficial. A graduate student at North Carolina State University studied whether or not [wildflowers help reduce runoff in roadside soils](#), and several researchers at the university are [testing a low-maintenance turfgrass](#) that could reduce costs and risks.

International News

Bat-like Echolocation: Japan scientists say [humans can use echolocation](#)—the ability to locate objects through sound—to identify the shape and rotation of various objects.

Food Sustainability (video): South Koreans are [required by law to separate food waste](#) so it can be collected and recycled; the country's recycling rate is 95%.

Loss and Waste Research (related to above): Check out the CAST Issue Paper [Food Loss and Waste](#) and the accompanying [video presentation](#).

Plastic Fantastic (video): Using innovation and grit, a Kenyan woman [turns plastic waste into bricks](#).

Worker Shortages: Scottish producers say [problems securing enough seasonal farm workers](#) could mean food supply chain issues, and [South Korea's aging workforce](#) increasingly depends on migrant labor.



Herders have perished and many lives have been affected in the [worst sandstorm season in both Mongolia and China](#) in a decade.

General Interest News

Agriculture Teachers: Two universities in North Dakota are partnering to [train more potential agriculture teachers](#) through an innovative master's degree program.

CRISPR Research: University of Pennsylvania researchers developed a CRISPR gene-editing technique that [lowered the levels of cholesterol](#) in the blood of test monkeys.

Benefits of Gardening: Academic researchers from three different institutions released a study about the [beneficial effects of gardening](#) on everyday lives.

Bee Health

(1) Cornell University scientists developed a medicine the size of a grain of pollen that might [help bees endangered](#) because of pesticides.



Native American tribes, among the

(2) A university study claims that [some bee species are in decline but not all](#) of them.

[hardest-hit by COVID-19, are celebrating a pandemic success story—vaccination drives.](#)

(3) Check out the CAST Commentary [Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It.](#)

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- * 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
- * American Veterinary Medical Association
- * Aquatic Plant Management Society
- * BASF Corporation
- * Cal Poly State University
- * Corteva Agriscience
- * 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

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

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The Science Source for Food,
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