



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..... Click to Read

[CAST Connections--P. 2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)



A Human-less World

A writer/explorer [visited multiple places affected by climate change](#) to answer the question, "What will we leave behind when we are gone?"

Unique Workshop

A first-of-a-kind workshop will focus on [Breeding Crops for Enhanced Food Safety](#). Taking place June 5-6 at UC-Davis, the sessions provide attendees a chance to collaborate and research. For questions regarding the program, [contact Dr. Maeli Melotto](#).

Pet Care in Homeless Communities



Fifteen Cal Poly students are in charge of a [veterinary community service clinic](#) as part of a class newly offered by the Animal Science Department.

May 3, 2019

Farm Economy Concerns

Although the U.S. economy is considered strong overall, certain sectors are facing financial challenges, including agriculture. Of course, there are diverse angles to each issue, but the following reports focus on the challenges some are facing.



(1) For every dollar American consumers spend on food, [U.S. farmers and ranchers earn just 14.6 cents](#), according to a report released recently by the USDA Economic Research Service. This value for 2017 is the smallest portion of the American food dollar farmers have received since the USDA began such reporting in 1993. The remaining 85.4 cents cover off-farm costs--including processing, wholesaling, distributing, marketing, and retailing (article from [feedstuffs.com](#)).

(2) This video spotlight from NBC [focuses on the state of farming](#) in America, with insights from those actually working on the land.

(3) A *Bloomberg* report says that personal income for farmers fell in the first quarter, as [losses mount from trade wars, low commodity prices, and extreme weather](#) conditions.

News and Views

Food Safety Proposals: The Food and Drug Administration is ushering in what it calls a [New Era of Smarter Food Safety](#), with a focus on technology to trace the origin of fresh produce and other foods when there's a recall or pathogen outbreak.

Glyphosate Announcement: In a proposed registration decision that would allow the herbicide to continue to be used in the United States, the

WFP Youth Institute

The [World Food Prize Iowa Youth Institute](#) occurs annually for students in grades 8-12 at Iowa State University. Students explore majors and careers related to combating global hunger and poverty while also presenting their ideas to real-world experts and professionals.

Three-minute Thesis

With cash prizes and competitive fervor on the line, University of Nevada-Reno students had [three minutes to present their doctoral dissertation](#) or master's thesis using only one static presentation slide.

National FFA Info

This site provides [information for FFA supporters and alums](#)--idea sharing, advocacy training, leadership, and more.

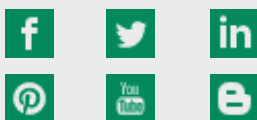
Global Leadership

The Cornell Alliance for Science Global Leadership Fellows Program is a [12-week intensive training course](#) held in Ithaca, New York, from late August to mid-November.

Send in Ideas

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

CAST Social Media



EPA reaffirmed its [conclusion that glyphosate is likely not carcinogenic](#). The public will have 60 days to comment on the document. [Some critics dispute the assurances](#).

Touting Economic Benefits for Agriculture: USDA Secretary Sonny Perdue unveiled a significant report that looks at the deployment of both [broadband e-Connectivity and Next Generation Precision Agriculture Technology](#) on farms and ranches.

AI and Agriculture: This article focuses on artificial intelligence, with the premise that of all the industries this technology is transforming, [it will have the most human impact on farming](#).

News from the Far Side of the Barn

Red Milk=Pink Feathers: This video shows how [baby flamingos gain their pink feathers](#). It's a co-parenting activity.

"Endgame" If They Are Caught? (video):

To celebrate the release of *Avengers: Endgame*, a group of MIT students [covered the campus' iconic dome with a Captain America shield](#).

Smell It with Your Tongue: Along with taste, [the tongue might pick up on odors too](#), according to research shedding new light on how we perceive flavor.



A wandering beluga whale wearing a harness has Norwegian officials speculating that it [may have escaped from a Russian military facility](#).

CAST Connections

Universities continue activities during summer sessions

The frenzy of publication rollouts, award announcements, and board member meetings has calmed down, but CAST's mission to communicate about agriculture and science stays constant--and that involves many students.

Dr. Mitloehner on Campus

The 2019 Borlaug CAST Communication Award honoree [Frank Mitloehner](#) visited the Iowa State campus and spoke with students at the animal science department. He provided insights and research for the group's livestock seminar series--with a special emphasis on livestock emissions. This class--the Dean's Global Food and Agriculture Leadership Course--will spend four weeks in Italy working with the United Nation's FAO about this important topic. The photo at right shows Dr. Mitloehner with the ISU agriculture leadership students.



Spring Semester Winding Down

The [CAST Education Program](#) includes 18 top-notch universities--and many other students through the NAAE organization and personal memberships. This is a good time of year to wish them well as a term ends--and to point out that *Friday Notes* links to stories about student programs, profiles, and research.

Throughout the summer, students and faculty members will continue to study, work, travel, join activities, and perform research--and this newsletter will continue to include links about education, agriculture, and science.

** An example of a university program that could have relevance for other schools: A group made up primarily of up-and-coming scientists at The Ohio State University has adopted "Citation Needed" as its official club name and a credo of sorts. These undergraduate and graduate students--most of them food scientists--want to clear the air when it comes to the bounty of information and misinformation

surrounding what we eat. [They help students strengthen science and agriculture communications skills](#), and they promote ways to find reliable information on the internet while maintaining a healthy skepticism about nutrition news from questionable sources.



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 glacier pic from bbc.jpg, dollar graphic from feedstuffs.com, man and dog photo from mustangnews.net, and whale pic from abcnews.go.com. P. 2 group photo from C. Dawson. Animal Sec. man and calf photo from wsj.com and horse pic from featureshoot.com. Food Sec. cafeteria pic from heated.medium.com and potato pic from cityfarmer.info. Plant Sec. robot pic from farmjournalagtech.com. Inter. Sec. jellyfish pic from phys-org.jpg and cheese pic from forums.punreal.com. Gen. Sec. horses pic from derby.ajc.com and plastic pic from theecologist.org. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Burger Trends: Burger King and Beyond Meat [claim that plant-based, beef-like burgers don't cannibalize sales of the real thing.](#)

The companies say they are gaining new customers, not losing meat eaters.

Pigs and Precision Farming: Big data and machine learning are likely to [transform the industry with an array of benefits](#) for both pig welfare and production efficiency.

Buzzing Down the Road: A new kind of air traffic is buzzing over the Atlanta and Raleigh-Durham areas thanks to "[bee highways](#)," a project started by a beekeeper who studied at NC State.

Bee Research (related to above): [Download the CAST Commentary](#) *Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It.*

Cattle Health and Performance: A multidisciplinary approach to beef production at the University of Nebraska is using genomics to [better predict beef cattle performance](#).

Poultry Resources: This USDA site provides articles on flock management, handling, animal health, technology, and [several other poultry-related topics](#).



Wild Horse Controversy: Animal welfare groups say an agreement they made with ranching interests will save wild mustangs from slaughter, but the compromise has opened a [split among horse protection advocates](#).

Keeping Those Chickens Happy? According to this article, relating your birds' daily habits to their evolutionary past can [reveal their natural patterns of behavior](#) and provide lessons for keeping them healthy and happy.



This [gene-edited calf in Brazil](#) has been engineered for warmer climates. For more about [gene editing and agriculture \(regulations, labeling, research\)](#), click [here](#).

Food Science and Safety News



A famous chef is [working to improve public school lunches](#), and he discusses the many challenges and

Making 225,000 Airline Meals a Day (video): A food facility in Dubai is the [largest catering facility in the world](#), and it operates like an impressive, well-oiled machine.

rewards. He is proud of the hummus-veggie dish, and he points out that barbecued chicken is definitely the crowd favorite.

Smart Protein Sources: Australian research suggests that protein shakes may deliver muscle-building benefits, but excessive consumption of branched-chain amino acids may have health hazards. The general conclusion--"[It's best to vary sources of protein.](#)"

Growing under Glass: This article examines the challenges and possibilities that come with the [use of huge, climate-controlled greenhouses](#) in Georgia.

Labels: An Oklahoma law [prohibits the misleading labeling of meat products](#) and prevents cell-cultured or plant-based products from using meat terms.



The Rise of the Sweet Potato: The [health benefits of sweet potatoes are increasingly recognized](#), and the work of a professor at NC State could transform the way they are eaten in several African countries.

Veggie-less Veggie Growers: In a unique advertising campaign, an iconic American fast-food restaurant plans to [keep its sandwiches veggie-free](#), but it will help plant 10 million vegetables in community gardens.

Plant Agriculture and Environmental News

Time-lapse Fungi and Slime (video): Watch as fungi and slime molds race to [decompose dead matter on the forest floor](#). In some jungles, species of fungi outnumber plants 33 to 1.

Sticky Situation: Researchers have devised a [sticky approach to protecting plants](#), one that could be applied less frequently than chemical pesticides and might be less toxic. This molecule has two separate chains of amino acids called peptides.

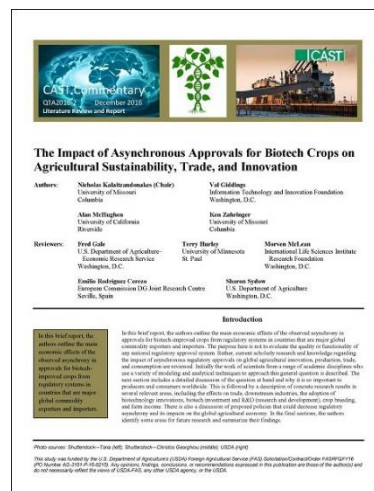
Restoring Flora and Fauna: A University of Nevada-Reno [faculty member and her students joined the efforts](#) to restore 435,000 acres in Humboldt and Elko Counties after the 2018 Martin Fire.

The Importance of Forests: Forests are [crucial for easing fertilizer and manure runoff](#), but the USDA's Forest Service says they are falling behind, and heavy rains are making it worse.

Distiller Grain Use: This site provides educational and technical services to those interested in finding out more about distillers grains--the [residue left from ethanol production](#) that is used for livestock feed and more.



Robots with Green Thumbs: California's grow houses are using [applied intelligence and robotics to cultivate greens](#) that take time and hard work to produce.



Click [here to access](#) the CAST Commentary, *The Impact of Asynchronous Approvals for Biotech Crops on Agricultural Sustainability, Trade, and Innovation*. For [more about gene editing](#), click [here](#).

International News

That Sinking Feeling (video): The [Indonesian government might move its capital](#) out of Jakarta--a massive, sinking city.

Can We Live Together? The Intergovernmental Panel for Biodiversity and Ecosystem Services will release a report focused on [assessing the relationship between humans and nature](#).

Seaweed and Sports Drinks: London Marathon participants were encouraged to use a new kind of refreshment--golf ball-size [pouches made from seaweed and filled with a sports drink](#).

Pancreatic Pigs: The University of Tokyo plans to start an experiment to [grow human pancreases in pigs](#) for transplantation using induced pluripotent stem cells.



Australian researchers used CRISPR genome editing to help discover an antidote to the [sting from the most venomous creature on earth](#)--the Australian box jellyfish.



Super Storms: Another [powerful cyclone](#) hit Mozambique (video), and a massive storm in the Bay of Bengal is [battering India and Bangladesh](#).

Who Moved My (Parmesan) Cheese? Italian officials want to keep "fake cheese" off the market. They are [obsessed with the purity of the name](#) "Parmesan."

General Interest News

Ethanol Emissions Lower: A new study released by the USDA finds greenhouse gas [emissions from corn-based ethanol are about 39% lower](#) than gasoline emissions.

Learning Skills and Communication: This university professor teaches anatomy and physiology to veterinarian students--and she also encourages them to ["tell the story of agriculture"](#) in a world where fewer people are tied to the land.

It's Only a Drill: NASA and other agencies ran a [mock killer-asteroid scenario](#) at the 2019 Planetary Defense Conference in order to show how they would react to such a dilemma.

Floods Affecting Agriculture: As a result of the swollen Mississippi River, [floods are stalling fertilizer shipments](#) in the latest blow to U.S. farmers.

Water Woes: A survey of state data shows thousands of private wells in Iowa have been [contaminated with nitrates and coliform bacteria](#).



Plastic Unfantastic (opinion): This writing says we can't go back to a world free of plastic pollution--but we can stop the problem from growing and [break our addiction to plastic](#).

Student Persistence: This Purdue student [did not follow a traditional path while pursuing her doctorate degree](#), but persistence paid off as the agricultural economics major delved into issues of food insecurity in Niger.



And They're Off: [Kentucky is best known for horses at this time of year](#), but the most recent Census of Agriculture shows horses aren't the only livestock contributing to the state's strong agricultural economy.

CAST Information

Check out CAST's page at the [YouTube site](#) to view highly regarded ag-science videos about probiotics, food safety, and water issues--or the latest video dealing with proposed mandatory labeling of GMO food items.



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- * Western Society of Weed Science

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