

# Friday Notes

Council for Agricultural Science and Technology

CAST

The Science Source for Food, Agricultural, and Environmental Issues

*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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## Day of Service



In the USA, January 20 is a day to celebrate Martin Luther King Jr., and for many, it is a day of service. The [federal government provides suggestions](#), and many local groups--such as this one in North Carolina--[organize events](#) like tree planting and various volunteer projects.

## CAST Membership Renewals

While our online membership form is under construction, please renew using these options instead: (1) email this [interactive membership form](#) with your credit card information to

Colleen at [chamilton@cast-science.org](mailto:chamilton@cast-science.org); (2) call our office at (515) 292-2125 to pay by phone with your card; (3) or send a check to CAST, 4420 West Lincoln Way, Ames, IA 50014. Thank you!

## BCCA Nominations

[Submit your nomination](#)

for the 2020 Borlaug CAST Communication Award by Feb. 3.

## Poultry Show Involves Students, Too

The Midwest Poultry Federation will host the [largest regional poultry show](#) in the United States from

January 17, 2020

## Food Security and Sustainability Agriculture and Science Play Positive Roles

Many believe that reducing climate change is a major challenge of this generation, and noted agriculturalists are leading the way to find solutions. Marty Matlock, Executive Director of the University of Arkansas Resiliency Center, has been around the world explaining how "agricultural practices--new and old--can return carbon from the atmosphere to the soil, [enhancing soil health and reducing climate impacts](#)."



Dr. Matlock and nine other [Borlaug CAST Communication Award winners](#)--such as recent recipients [Frank Mitloehner](#) and [Jayson Lusk](#)--use their expertise to explain how agriculture and science can help feed the world while sustaining our environment.



Matlock was recently elected to [chair the Leaders' Alliance of the National Council for Science and the Environment](#). He emphasizes the role universities can play in the efforts for food security and sustainability. "We have ten years to make significant progress on implementing the [Sustainable Development Goals](#) of the United Nations including no poverty, no hunger, good health, and well-being."

## News and Views

**USMCA Passes:** As the [U.S.-Mexico-Canada Agreement](#) passed the Senate, USDA Secretary Perdue said, "USMCA is great news for America's farmers and ranchers." Check here for [reactions from various agriculture groups](#) including crop growers, animal producers, and The Fertilizer Institute.

**U.S.-China Trade Agreement:** The USDA calls the new U.S.-China Phase I Deal a [bonanza for American agriculture](#). The agreement promises improved [trade for farm commodities](#), although some of the most difficult [disputes still need to be worked out](#).

**NEPA Change:** The Trump Administration announced a proposed [rule to modernize and accelerate environmental reviews](#) under the National Environmental Policy Act. [Reactions to the changes vary](#).

**Ten Points about the Ag Economy:** Land 'O Lakes CEO Beth Ford says rural America is "[the new inner city](#)," with an aging population, labor shortages, a need for high-speed internet, and finance problems.

March 17-19 in Minneapolis. Check out their [Student Careers Program](#).

### GMO Lecture

Nobel Laureate Sir Richard Roberts will talk about the benefits of [genetically modified organisms](#) on Jan. 21 at Iowa State University.

### Send in Ideas

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

### CAST Social Media



## News from the Far Side of the Barn

**Cat Power (video):** Coyote tales continue - this time, a [fearless cat defends its turf](#) against three attacking coyotes.

**Wrestling with Pythons (video):** Hunters capture invasive and harmful snakes in [Florida's annual Python Challenge](#).

**A Fast Tortoise (video):** A giant tortoise species on the Galapagos Islands was nearly extinct, but the sexual prowess of a 100-year-old male--and the hard work of many females--[rejuvenated the population](#).



Octopuses must come from outer space--they [camouflage themselves in a flash](#), squeeze through tiny holes, and coordinate "nine brains."

## Upcoming CAST Publication Highlights the Importance of Food Animal Veterinarians

### *And We Want Your Help: A Request for Insights and Anecdotes*

With a major publication addressing the recruitment and retention of food animal veterinarians (FAVs) coming this spring, CAST is interested in collecting opinions and experiences from our veterinarian members "in the field."

FAVs play a significant role in ensuring our global food supply, particularly by safeguarding the health and welfare of livestock, poultry, and aquatic food animals. But the needs in animal agriculture have changed along with other elements influencing veterinarian supply and demand.

CAST's forthcoming publication will discuss the challenges of recruiting and retaining FAVs in the United States--including factors such as consolidation, technology, funding, rural influences, student training, and financial strain.



### *Share Your Story*

If you would like to be part of our collective narrative by sharing personal anecdotes, an opinion piece, or helpful resources for aspiring veterinarians, please contact Kim Nelson at [knelson@cast-science.org](mailto:knelson@cast-science.org) or fill out this secure online [Google form](#).

## Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 MLK graphic from [nationalservice.gov](#), sustainability graphic from [medium.com](#), and octopus pic from [catapult.co](#). Animal Sec. beef graphic from [beefresearch.org](#) and bison pic from [nwf.org](#). Food Sec. restaurant poster from [hearstapps.com](#) and indoor plant pic from [squarespace.com](#). Plant Sec. student photo from [osu.edu](#) and tree pic from [nautilus.jpg](#). Inter. Sec. smoke pic from [worldofbuzz.com](#) and food shelf pic from [albertonrecord.co.za](#). Gen. Sec. frog collage from [smithsonian.com](#) and [advancedsciencenews.com](#); vape pic from [independent.co.uk](#). Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service or CAST.



## *Animal Agriculture and Environmental News*

**Pig Health (video):** Experts talk about the fact that [sow mortality rates in the United States have increased](#) in recent years.

**Pig Traits:** Scientists from Iowa State and other institutions are using daily feed intake data to find the [most favorable traits for pigs](#) to survive health challenges.

**Picking the Right Stock:** Kansas State University experts give [advice about breeding decisions](#) for cow/calf operations.

**Honey Bee Facility (video):** The USDA is unveiling a [new honey bee research facility](#) on the UC-Davis grounds.

**Honey Bee Research (related to above):**

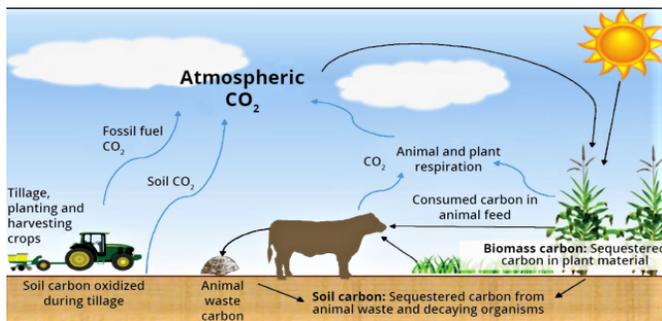
[Click here for the CAST Commentary](#), *Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It*.

**Poultry Program:** A North Carolina State University program teaches about processing procedures for chickens, turkeys, shell eggs, and liquid eggs--and [much about food safety](#).



**Snowstorm Zen (video):** [Bison enjoy the effects of a snowstorm](#) at Yellowstone National Park. Also, this essay looks at "[what America lost](#) when it lost the bison."

**Beef Hearts:** Researchers from the USDA and the University of Nebraska-Lincoln identified two major genes associated with [bovine congestive heart failure in cattle](#).



**Beef cattle help with carbon sequestration** by producing human food from untilled pastures and grasslands and by the integration of cattle grazing into "no-till" cropping systems. **NOTE:** The CAST Task Force Report, *Carbon Sequestration and Greenhouse Gas Fluxes in Agriculture: Challenges and Opportunities*, is now [available for free download](#).

## Food Science and Safety News

**Universities Fighting Hunger:** The University of Kentucky will host the [Universities Fighting World Hunger Summit](#) March 19-20.

**Call for an "Agricultural Moonshot":** Jack Payne--Univ. of Florida--says we make choices every time we eat, and [publicly funded science can help guide](#) billions of choices toward a better way to feed the world.

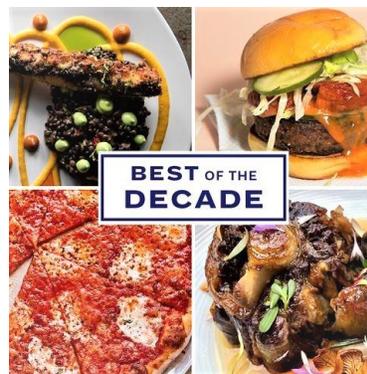
**Verbally Pulled Pork:** Impossible Foods launched two new products, but the National Pork Producers Council said naming the plant-based products designed to mimic real pork is a [violation of labeling laws](#).

**Prickly Pear Potential:** This University of Nevada-Reno research-extension project will evaluate the field performance of the prickly pear cactus as [potential for forage, food, and biomass crops](#).



**Students Eating Vertically:** Urban farming comes in many forms, and now one of those, [vertical farming](#), is helping feed students at Texas A&M University.

**A Ginger Break for Asthma Patients?** A North Carolina A&T State University scientist is studying ginger to see if it can [help asthma patients breathe easier](#).



"Best lists" are debatable, but this foodie looks at influential restaurants, [from taverns to pizzerias to formal restaurants](#).

## Plant Agriculture and Environmental News

**Analyzing Soybean Varieties (video):** Many producers judge feed based on price and protein content. These experts look at soybeans with a focus on [protein levels, amino acid levels, and yields](#). Also, the Mississippi State University Extension Soil Testing Laboratory has revised the soil test-based potassium [fertility recommendations for soybeans](#) in Mississippi.

**First WASDE Report of 2020:** The January [World Agricultural Supply and Demand Estimates](#) report resulted in [generally subdued responses](#), with a few [animated opinions](#) thrown in.

**Hemp for a Change:** Some think hemp could be a [change factor in agricultural diversity](#) and lead to better support for minority farmers.

**Aspire to Grow:** Cal Poly University's 2020 [Aspire to Grow Conference](#) explores innovation in the food and agriculture sectors and informs students about relevant career opportunities.



**Arboreal Longevity (video):** With 50-meter-deep roots, the "Tree of Life" in Bahrain survives, but scientists are studying [even older trees](#) and the secrets that help them live more than 1,000 years.



**Summer in Winter:** The Ohio State University is joining with state efforts to [increase the amount of greenhouse produce](#) during winter months.

**Environment Protection:** [Environmental quality research](#) at Tuskegee University is conducted with the collaboration of government agencies.

## International News

**Devastating Eruptions (videos):** A [volcano near Manila](#) in the Philippines could erupt again. [Many homes](#) have been destroyed.

**Wildfires and Beef:** This story looks at the impact of the [wildfires on Australian cattle and beef](#) production and trade.

**Asian Milk:** Vietnam continues to [get serious about dairy](#)--with growing herds, corporate wranglings, and a focus on the China market.

**Elephants in the Wild:** Conservationists say a [record number of elephant deaths](#) occurred in Sri Lanka this year. Killing them is illegal, but the animals often come into conflict with rural communities.

**Crackdown in Brazil:** A growing [black market for pesticides](#) has left Brazil in a bind, as they fight robberies at home and crack down on smuggled agricultural products from Paraguay.



**Food in the Nude:** A New Zealand supermarket program called "Food in the Nude" [ditches plastic packaging](#) for environmental reasons--sales have gone up.

**Reducing Food Loss and Waste:** [Click here to access](#) the CAST Issue Paper *Food Loss and Waste*.



NASA has been using a fleet of satellites to see the [smoke patterns from the devastating fires in Australia](#), and scientists expect the smoke to make a "full circuit" around the world.

## General Interest News

**"Frogbots" for Your Health (videos):** Scientists are working on living, self-healing robots using stem cells from frogs. While some advise caution with their use, the xenobots [might help with regenerative medicine and environmental cleanups](#).

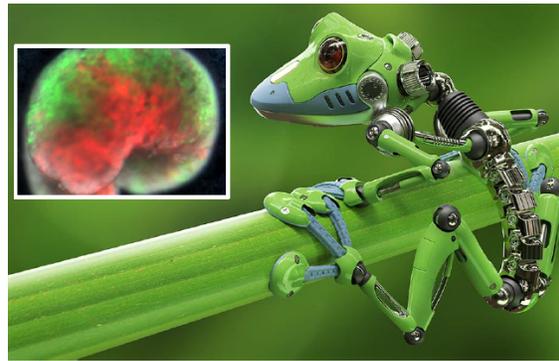
**Do Cuttlefish Eat Popcorn at the Movies? (video):** This study of cuttlefish watching and reacting to 3D videos is fun, but it might also help with our [understanding of evolution and depth perception](#).

**Radio Legend:** Influential farm broadcaster [Orion Samuelson is still on the radio](#) broadcasting positive news about agriculture.

**Homes for Needy Animals:** The University of Missouri has a robust [adoption program for animals](#) involved in research.



**Up in Smoke:** Cornell University scientists developed a [learning module for high school classrooms](#) that encourages students to directly test the effects of e-cigarette vapor on living cells.



The mechanical image rendition is impressive, but real xenobots are biological [robots using stem cells from frogs](#)--story link with videos and additional information at left.

**On Thin Ice:** Road salt does melt ice, but when overused or mismanaged, it [can become a serious environmental pollutant](#).

## 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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- \* Agricultural & Applied Economics Association
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- \* 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
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- \* American Society of Agricultural and Biological Engineers
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- \* CropLife America
- \* Crop Science Society of America
- \* Entomological Society of America
- \* Innovation Center for U.S. Dairy
- \* Land O'Lakes
- \* 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 Carolina Biotechnology Center
- \* 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
- \* Tyson Foods
- \* 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

- \* Cal Poly-San Luis Obispo
- \* Cornell University
- \* Iowa State University
- \* Kansas State University
- \* Mississippi State University
- \* North Carolina Agricultural and Technical State University
- \* North Carolina State University
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- \* The Ohio State University
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- \* University of Missouri-Columbia
- \* University of Nebraska Agricultural Research Division
- \* University of Nevada-Reno College of Agriculture, Biotechnology and Natural Resources



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