



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

[A Message for CAST's Future--P. 2](#)

[Animal Agriculture News](#)

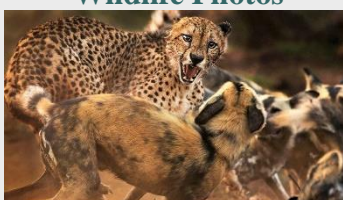
[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

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Wildlife Photos

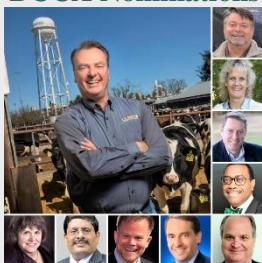


Award-winning wildlife photos from London's Natural History Museum include this snapshot of a [cheetah confronted by wild dogs](#).

Share Our Visual Story

We have so many new followers on social media that we decided to share a fun brief bio of CAST. [Check it out and share on Twitter.](#)

BCCA Nominations



Nominations are open for the 2020 Borlaug CAST Communication Award. [See details here.](#)

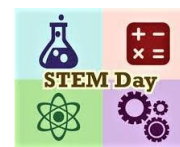
Call for Papers

November 8, 2019

STEM in Education and Agriculture

National Day Promotes Year-round Learning

The [STEM concept](#) was designed as a way to inspire young people to explore and pursue their interests in Science, Technology, Engineering, and Math. National STEM Day (November 8) is now [National STEAM Day](#), with the added letter referring to the "arts." Sounds good, but we would like to add another "A" reference by mentioning how agriculture can tie it all together--and the [Education Program](#) members of CAST are at the forefront of promoting learning and careers for students of all ages.



Agriculture uses a collection of scientific disciplines to solve challenges in our food production system.

Some of the Sciences Used in Agriculture

Entomology	Chemistry
Genetics	Biology
Biotechnology	Animal Science
Veterinary	Economics
Medicine	Computer
Environmental	Programming
Science	Data Science
Engineering	Sociology

[Click here to enlarge.](#)

The [National Association of Agricultural Educators](#) provides a host of resources for teachers, administrators, and students ranging from middle school to post secondary. Many universities focus on STEM courses blended in with agriculture programs. For some examples of the offerings and resources, check out these pages from the [University of Florida](#), [North Carolina A&T State University](#), and [The Ohio State University](#). All of our member university schools have dynamic examples of research, education, and development, including (1) [Tuskegee University's](#) connection with NASA's Office of STEM Engagement, (2) the [University of Nevada-Reno's](#) aerospace engineering program, and (3) the [University of Kentucky's](#) program designed to graduate high-quality physics teachers.

News and Views

Universities including Texas A&M, Kansas State, Nebraska-Lincoln, and Kentucky are involved with a conference next spring in California: *Autonomous Air and Ground Sensing Systems for Agricultural Optimization and Phenotyping V*. The [call-for-papers date has been extended](#) to November 10.

New Publications

CAST Issue Papers coming early in 2020: *The Microbiome's Positive Impacts on Crops* and (2) *Impact of Recruitment and Retention of Food Animal Veterinarians on the U.S. Food Supply*.

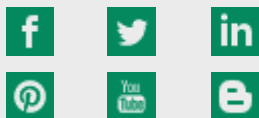
Summary of Activities

Summer is our slow time at CAST, but we still had a lot of things happen. [Read more about what we accomplished on our website](#).

Send in Ideas

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

CAST Social Media



Market Facilitation Program: The USDA will provide another round of [payments to producers](#) harmed by the trade dispute with China.

Trade Talk Movement: United States and Chinese negotiators [tentatively agreed to eliminate some tariffs](#), as talks continue to finalize a partial Phase One trade deal.

GMO Q&A: *GMO Answers* and the American Feed Industry Association created a video that answers common [consumer questions about GMOs](#), animal feed, and pet food.

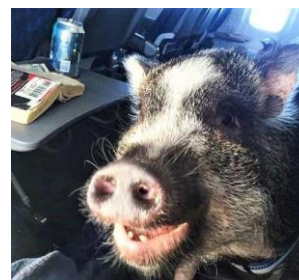
Trade War Survey: A Purdue University survey looks at the [opinions U.S. farmers and ranchers have](#) about the China-U.S. trade war.



News from the Far Side of the Barn

This Comfort Animal Hogs the Seat:

Flight attendants say they've hosted cats, monkeys, a kangaroo, and a miniature penguin. In this article, Hamlet the pig brings [attention to the onboard-animal issue](#).



Hamlet the pig proves that pigs can fly. Story at left.

Never Too Old for Bull Riding (video):

This rodeo clown took his [2,000-pound bull into a nursing home](#), and one elderly man hopped right on.

Dumpster-diving Bear (video):

[Police officers help a trapped bear](#) named "T-shirt" get out of a garbage dumpster.

CAST Annual Meeting

A Message for CAST's Future

In 1972, CAST was created to be a source of credible and trusted scientific information about agricultural topics. That goal has not changed and is, in fact, more important than ever.

This was the message from Juan Tricarico, who transitioned into the role of CAST President at our annual meeting on October 31. "Great moments come with great opportunities," he said. "Our greatest asset becomes our greatest challenge."

Juan is referring to the way society consumes information--digitally through mobile devices, ever at the ready to inform us of whatever topics grab our attention. As Juan emphasizes, the current preferred form of content consumption is effortless and quick--it is also easier to disregard accurate information and mistake misleading content as credible.

In his address to the board members of CAST and invited guests from the host institution, the University of Arkansas, Juan had a



Outgoing CAST President Gabe Middleton passing the gavel to this year's President Juan Tricarico.

clear message. "CAST must continue building on its strengths: its history, scientific rigor, reputation, and membership"

Read more about the [annual meeting on our blog](#). CAST staff and board members appreciated the hospitality provided by the University of Arkansas. [This news release](#) from their extension office provides some highlights from the visit.

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 cheetah pic from amazonaws.com, STEM graphic from wnystem.org, flag pic from firstpost.com, and pig pic from MeganPeabody,msn.com. Animal Sec. elephant pic from elephantjournal.jpg and pig pic from pinterest.com. Food Sec. cheese photo from foodandwine.com and beef pic from whatsonxiamen.com. Plant Sec. famine photo from eventland.eu and corn pic from cnsnews.com. Inter. Sec. cassava photo from miromedium.com and nut pic from abc.net.au. Gen. Sec. grain bin pic from KatherinePlessner.jpg and book pic from MichellePayn. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service or CAST.



Animal Agriculture and Environmental News

Beef Production: Beef producers commit to animal care, and more than 85% of today's beef supply in the United States comes from a [Beef Quality Assurance-certified](#) farmer or rancher.

Chicken Meat: The chicken industry stands to benefit from a more diversified profit pool that includes [both white and dark meat](#), and tech advances are helping with this transition.

My Family's Egg Farm: This Iowa author writes books about agriculture for children, and her latest covers a story about [raising chickens and producing eggs](#).



Cornell researchers are applying AI technology to study elephant--and poacher--behavior to help [reverse the population decline of the majestic animals](#).

Home, Home on the Digital Range: This article looks at the [modern cowboy and the future of livestock operations](#)--including smartphones, drones, and digital ear tags.



Pig Videos: A new video series from the National Pork Board creates opportunities for farmers and others involved in pork production to share with consumers a [firsthand view inside modern farms](#).

Porker Tour (video related to above): This farmer takes us on a [behind-the-scenes look](#) at three hog facilities.

A Variety of Methods: This British farmer raises Yorkshire [pigs using different methods](#) that suit his situation and environment.

Food Science and Safety News

Cell-cultured Meat (video): This clip provides [insights about cell-cultured meat](#) and its readiness--or not--for mainstream consumption.

Meat and Livestock Expert: In his [many tweets, blogs, and presentations](#), Dr. Frank Mitloehner uses science-based information to comment about emissions, beef consumption, communication, and more. The [2019 BCCA](#) winner's YouTube [presentation is here](#).

Students and Food Insecurity: Food insecurity and housing instability are defining [factors for some college students](#). This writer gives her opinion of the situation in light of food pantries, loans, vouchers, and other "patchwork approaches."

USDA Info: This site provides comprehensive information about the USDA's involvement with [food processing, distribution, and safety](#).



Enjoying a Steak: This article looks at [beef grading from yesterday to tomorrow](#)--and the author is a big fan of marbling.

A Look at Plant-based Meat: The nonprofit Center for Consumer Freedom placed a full-page ad in *The New York Times* showcasing [quotes from nutrition and medical professionals](#) on plant-based meat's healthiness--or lack thereof.



Top Cheese: In what some call the "Oscars of Cheese," an [entry from Oregon](#) beat out 3,800 cheeses from 42 countries to take the top prize.

Plant Agriculture and Environmental News

Biotech Crops: Based on FAO global reports, 78% of soybeans, 76% of cotton, 30% of maize, and 29% of canola were [biotech crops in 2018](#). Other biotech crops include sugar beets, alfalfa, papaya, squash, potatoes, apples, sugarcane, and eggplant.

Irrigation: A grant will help researchers, including University of Nebraska-Lincoln experts, combine data-collection, modeling, and decision-making so crop producers can more easily [decide when to irrigate](#).

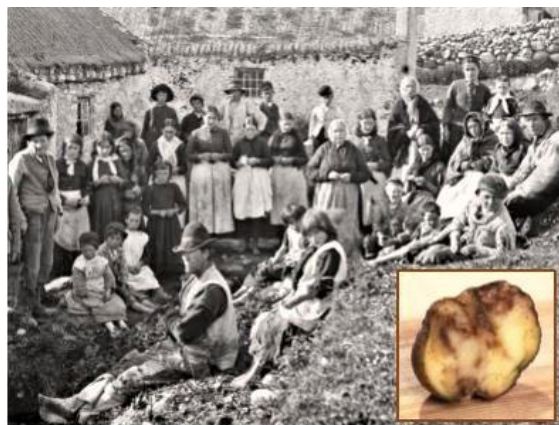
Land Use and Soil: This research examines how land use in the [Lower Mississippi River Valley](#) affects soil aggregation.



Higher Crop Yields: Iowa State University researchers have shown they can reliably increase corn yields up to 10% by [changing a gene that increases plant growth](#)--regardless of the growing conditions.

Nitrogen Use: Applying nitrogen fertilizer is [one of the most important decisions](#) corn growers make. These researchers developed a [real-time modeling framework](#) for soil nitrogen availability in corn fields.

Crops, Nutrients, and Water Quality: [Check out the CAST Issue Paper](#) *Reducing the Impacts of Agricultural Nutrients on Water Quality across a Changing Landscape*.



Scientists at Cornell, ARS, and Rutgers [identified a virus](#) that appears to increase the effects of the fungus-like pathogen that caused the [devastating Irish potato famine](#) of the 1840s.

International News

Instant Noodle Craze (video): Some Japanese say [instant noodles are the country's greatest invention](#) of the 20th Century. In this clip, an "animated" narrator provides information about how the trend developed.

Plants Good, Animals Bad? Not So Fast: A journalist learns that when it comes to tackling the climate crisis, British farmers want the public to know they are making [progress in both plant and animal realms](#).

EU and Farm Subsidies (opinion): The European Union spends [\\$65 billion a year subsidizing agriculture](#), but according to this article, a chunk of that money emboldens strongmen, enriches politicians, and finances corrupt dealing.

International Trade: Reports indicate that [Canada will resume shipments of pork and beef to China](#), after the Asian nation lifted an import ban.



A Tree Grew in Queensland: Australian researchers say the global [macadamia industry may have originated from nuts from a single tree](#) or small number of trees that were then taken from Queensland to Hawaii in the 19th century.

Considering Diversity (related to above): Check out CAST IP65, [Protecting Food Animal Gene Pools for Future Generations](#).



A biologist's TED talk explains how she works with [scientists and farmers to help save the crucial cassava crop](#).

General Interest News

Will the Milk Have a Pumpkin Spice Flavor? Discarded pumpkins become an environmental issue this time of year, and dairy farmers are stepping in to help by [feeding the waste to appreciative cows](#).

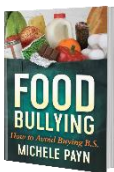
Organic Agriculture Education: Many students are interested in organic farming, and [courses have popped up at universities around the country](#). Instructors share their experiences, and [researchers provide data](#).

Razorback Sustainability: A University of Arkansas project features a student-led program that [recovers surplus food and redistributes it](#) to those in need.

Sun, Wind, and Water: A study shows that [solar and wind farms enhance drought resilience](#) and aid in groundwater sustainability.



Due to wet corn, a late harvest, and the need to dry a huge amount of grain all at once, growers are facing [propane shortages in the Midwest](#).



Food Fight: This [book looks at the "food battleground"](#) where marketing labels and misinformation are used to bully and demonize people about their eating choices.

Food, Packaging, and Health: Design techniques are often used fairly to communicate a product's healthy content, but they are also [sometimes employed in misleading ways](#).

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.



CAST provides Friday Notes as a benefit to its members. Please do not forward, edit, copy, or distribute the Notes in any form to nonmembers without the express permission of the CAST Executive Vice President Kent Schescke (kschescke@cast-science.org). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits. Contact Melissa Sly at 515-292-2125, ext. 232 or msly@cast-science.org, or [CLICK HERE](#) for CAST membership information.

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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 for Nutrition Nutritional Sciences Council
- * 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
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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
- * 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
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- * North Carolina State University
- * Purdue University
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