

# 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 the CAST organization.

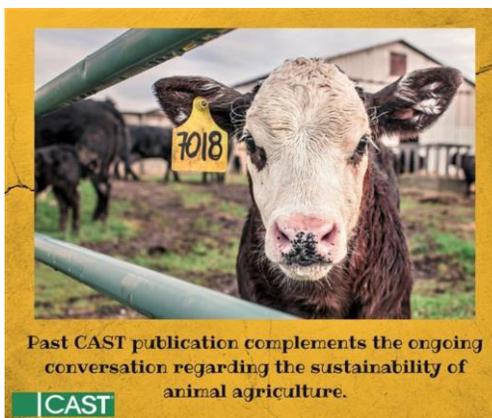
May 26, 2017

## Livestock and the Environment

*Using science to better understand animal agriculture*

The term "sustainability" is important, but it can also be hard to define or measure. Consumers, policymakers, and food producers alike are concerned about the environment, but it is best to follow the science and study the facts before deciding how to ensure global food security.

Some believe that feed produced for animal consumption competes with human food supplies. For example, the beef industry has been criticized for its "environmental hoofprints." [Recent articles and a relevant CAST Issue Paper](#) from a few years back address this issue.



[Livestock expert Jude Capper](#) sums it up this way: "Livestock sustainability continues to be a significant issue for producers, policymakers, and consumers worldwide. We are faced with the challenge of communicating the benefits of livestock production to food stakeholders to maintain a resilient global industry."

## News and Views

**\*\*Federal Budget Proposed:** President Trump's [fiscal 2018 budget](#) proposes to cut crop insurance by \$29 billion over 10 years, slash nearly 30% from food stamp spending, and gut some key conservation, international food aid, and rural development programs. With hopes of reducing federal spending by \$3.6 trillion over 10 years, the government would reduce USDA staff by 5.5% across a range of agencies. Several U.S. farm groups [pushed back against the proposal](#) to slash agriculture spending, viewing it as a fresh threat to a struggling farm

### In This Issue..... Click to Read

[CAST Board Gains from New Additions--P. 2](#)

[Animal Agriculture News--Meet Hamish the Highlander](#)

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[Plant and Environment News--Pest Control](#)

[International News--Seed Vault Avoids Disaster](#)

[General Interest News--Beauty in the Buzz](#)



### Remembrance

Memorial Day--May 29th in the United States. May it be a peaceful weekend around the world.

### Ag Opportunities

Jeff Simmons (Elanco VP & 2014 BCCA winner) gives 5 reasons why he thinks [big opportunities await young people](#) in the world of agriculture.

### CAST Welcomes New Staff Member



Kylie Peterson brings an Iowa State ag degree, a family farm background, and varied social media expertise to CAST. [Click here to read about](#) her skills and experiences, including extensive work with Simmental cattle and an intense period of time with a cantankerous steer named Buck.

### Food Evolution

Narrated by Neil deGrasse Tyson, this important new film explores the [controversies surrounding GMOs](#) and food--it features varied opinions from Mark Lynas, Jeffrey Smith, Alison Van Eenennaam, and others.

### Campus Activities

The [Texas A&M Beef Cattle Short Course](#) (Aug. 7-9) attracts attendees from around the world. And the [Kansas State Research and Extension Office](#) released these dates regarding ag-related summer events.

### Developing a Successful School Program

This farm-to-school program empowers children and their families to [make informed food choices while strengthening the local economy](#) and contributing to vibrant communities.

### CAST Social Media

Click here for [links to CAST sites](#):  
Twitter, Facebook, LinkedIn,  
Pinterest, videos, and blogs.

economy. Agriculture Secretary Sonny Perdue affirmed that crop insurance and other [farm programs are important, but](#) he says it is critical to address the federal budget deficit.

### \*\*Prepping for the Next

**Drought:** The five-year drought that shook California agriculture to its core may be over in most places, but the sense of urgency it created continues to grow. In university laboratories and farm fields around the state, growers and researchers are working feverishly to find ways for the state's orchards, vineyards, and row crops to [get by with as little water as possible--before the next big drought](#).



**\*\*Smart Labels--Biotech Included:** While some food companies use vague or misleading labels to attract buyers, a number of companies decided to make the voluntary disclosure that their food includes ingredients that are [improved with the use of biotechnology](#).

## News from the Far Side of the Barn

### Coffee, a Donut, and a Few

**Rats: (video):** A San Francisco theater says it will [host several Rat Cafe experiences](#) this summer. "They're tame and you can pet them!"

**Laughing With--Not At--Some Funny Animals:** Check out [award-winning photos of creatures](#) caught in odd poses.



Waiter--there's a rat in my soup!

**Sittin' on the Dock of the Bay (video):** In case you missed this viral video, a sea lion surprises everyone by [dragging a young girl into the water](#), and a quick-thinking grandpa saves her.

## More Ag Experts Added to the Board of Representatives

*New Organizations and New Names Joining CAST*

CAST has benefited from the guidance and leadership of respected experts since 1972, and today's list is no exception. Busy people put in time to help promote the mission of communicating valuable, science-based information--and this week we note some of the recent changes to the Board of Representatives.

Land O'Lakes, a longtime supporter of CAST, has recently added Jason Sewell as a CAST board member. Jason is a Senior Scientist for Research and Development and will be representing Purina Animal Nutrition, LLC, on the animal work group.

#### **BASF Corporation Now Represented on the Board**

Luke Bozeman will represent BASF Corporation where he is the Director of Research and Development Crop Protection. Luke is responsible for general management related to biological product performance, along with affiliated programs that support and achieve commercialization of BASF Crop Protection and Functional Crop Care development opportunities and regional brand extensions in the United States and Canada. A former resident of northwest Florida, Luke grew up on a diversified farm and later received a degree in entomology from Auburn University.



#### **National Milk Producers Federation Now Represented on the Board**

Jamie Jonker will represent the National Milk Producers Federation where he serves as Vice President of Sustainability and Scientific Affairs. Jamie's current responsibilities include animal health and welfare, animal biotechnology, technical service issues, dairy farm biosecurity, air and water quality, and sustainability. A graduate from the University of Maryland, Jamie has a Ph.D in animal science, and he is actively involved in numerous national and international committees.

## **Friday Notes News Categories**

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 drought pic from ecowatch.jpg and rat pic from pbs.twimg.com. Animal Sec. cow pic from ichef.bbc.co.uk. Food Sec. pineapple pic from mycaseiscuter.com. Inter. Sec. firefighter pic from earthables.com. Gen. Sec. smartphone pic from vtnews.news.edu. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



### ***Animal Agriculture and Environmental News***

**A Look at the Chicken Industry (videos):** This poultry company created a series of films to provide a glimpse of [how chickens make it to dinner tables](#). Stories come from farmers, animal welfare specialists, veterinarians, chefs, and more.

**Beef Sustainability (see article on p. 1):** This blog [features several articles and a research paper](#) that examine beef and environmental concerns.

**A Lighter Hogprint (related to above):** Hog producers continue [efforts to improve environmental sustainability](#), and this study shows the progress made by the pork industry.

**Milk Labeling Continues to Be an Issue:** State milk regulators requested that the U.S. Food & Drug Administration work with them to enforce the [proper use of milk and milk product labeling terms](#).

**Egg Facilities (slideshow):** A patent-pending facility and construction design is trying to reinvent how a layer house can be built, as [cage-free egg facilities utilize innovative new construction processes](#).

**Caring for Calves:** According to Kansas State research, [susceptibility to disease in young, long-hauled calves](#) is greatly enhanced, and the consequence of sickness is a major cause for poor production outcomes.

**Promoting Pork (opinion):** According to this National Hog Farmer blog, the pork needs of consumers worldwide are a [mixed bag of personal preferences and cultural differences](#).



An American farm couple share their [love of Scottish Highland cattle](#), including Hamish.



## *Food Science and Safety News*

**Finesse Rather Than Hammers and Brute Force (video):** Gordon Ramsay shows how to [get the last bit of meat from a lobster](#).

**Butter Is Back (includes podcast):** A new book looks at the [history and varied flavors of butter](#)--*Butter: A Rich History*.

**Chocolate and Your Fluttering Heart:** A new Harvard study suggests that regularly eating [small amounts of chocolate may help protect your heart](#) from atrial fibrillation.

**Juiced (opinion):** The American Academy of Pediatrics recommends that kids under the age of one should avoid fruit juice--[whole fruit is preferable](#). Some evidence shows that 100% orange juice is beneficial for adult health.

**Eat Your Fruits and Vegetables (opinion):** Media stories about biotech and pesticides may convince some consumers that it is not [safe to eat certain fruits and vegetables](#), but that is not the case.

**Peppered:** According to this link, [black pepper has been proven to reduce carcinogenic compounds](#) potentially found in grilled meats.

**New Policies to Fight Food Waste:** This award-nominated essay about the USDA's [new policies in 2016 to reduce food waste](#) was written by a University of Arkansas law student.



[Pink pineapples finally get approved by the FDA.](#)

**Fish Freshness Is a Gas:** Taiwanese researchers developed a [semiconductor sensor that detects fish freshness](#) in one minute--based on measuring gases.



## *Plant Agriculture and Environmental News*

**Cover Crop Demo (video):** This crop expert describes his no-till practice and discusses the [techniques he uses to limit soil disturbances](#) and maintain continuous cover on his farm.

**Crop Damage:** The [spread of pests and pathogens that damage plant life](#) could cost global agriculture \$540 billion a year, according to a report released by the Royal Botanic Gardens in London.

**Pest Control (related to above):** Gene drives are a class of biotechnologies with the [potential to transform pest control](#) during the next decade.

**What Came In Number One?** The Weed Science Society of America recently announced a [list of the most troublesome weeds](#)--based on herbicide resistance, frequency, and crop damage.

**Corn Cups and Soybean Sneakers?** [Corn and soybeans have been used to make](#) automobile seat cushions, IKEA mattresses, yogurt cups, moisturizers, sneakers--and soon maybe even Legos.

**Biotech Versus Bacteria:** Scientists are [genetically engineering viruses to get rid of bacteria](#) threatening the \$3.3-billion orange industry in the United States.

**Fighting a Parasite Nematode:** A researcher at Iowa State University studying a parasite nematode that threatens populations worldwide [may have found a lead to improved therapies](#).

**Managing Mutations in Tomatoes:** Scientists use [CRISPR edits to harness two mutations](#)--each cherished by breeders but detrimental when combined--to improve on 10,000 years of tomato domestication.



[Click here for free access](#) to CAST IP58, *Crop Protection Contributions toward Agricultural Productivity*.



## *International News*

**Taking to the Sky (video):** Hong Kong imports more than 90% of its food--much of it from mainland China. But more people are [growing their own--some on hidden rooftops](#).

**Seed Vault Survives Flooding:** Norway is boosting the flood defenses of its arctic-based Global Seed Vault after water entered the entrance tunnel--[high temperatures caused the permafrost to melt](#).

**Digital Tech in Africa:** Entrepreneurs are now interested in [how farmers work and how they can help improve yields](#)--cloud computing, computing systems, connectivity, open-source software, and other digital tools.

**Tech, Innovation, and Agriculture (graphs and charts):** This article contends that [China is undergoing a revolution](#) that may be every bit as influential as the industrial transformation that rewrote global trade.

**Drought Brings Shortages:** Kenyans have been facing [shortages of basic foods following a drought](#) last year that affected the country's food stocks.

**Poultry Farmers Struggle in Ghana:** Some poultry farmers in Ghana claim that the constant [refusal by the government to pay debts](#) owed them is sending the industry to its knees.

**Public to Weigh In:** China will survey the public's acceptance of genetically modified food, a technology the government says would boost yields and sustainable agriculture--[but the public has been skeptical](#).



Firefighters might rescue cats from trees, but across the United Kingdom they are being [trained to cope with large animals that need help](#).



## General Interest News

**Let It Bleed:** New research has nudged scientists closer to one of regenerative medicine's holy grails--the ability to create customized human stem cells [capable of forming blood that would be safe for patients](#).

**Water Conservation:** Mobile Drip Irrigation involves attaching driplines to center pivot drops. It has the [potential to eliminate water losses](#) due to spray droplet evaporation, water evaporation from the canopy, and wind drift.

**Arboretum App:** A new USDA app will make sure visitors to the vast National Arboretum facility [can easily find the gardens and plants they want to see](#) (photo at right).

**Beauty in the Buzz:** Up to 15,000 people took part in the [Great British Bee Count](#)--recording 383,759 bees--and these photos show some of the beauty that comes with the buzz.

**Folta Speaks about Vertical Farming (podcast):** Vertical farms (or [repurposing urban space for agriculture](#)) are becoming increasingly feasible--as lighting, cooling, and automation advances are more and more efficient.



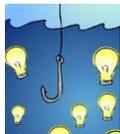
In case poison ivy is [not on your wish list](#).

**Golden Rice Controversy:** Some claim that Golden Rice could help 250 million preschool [children around the world who are vitamin-A deficient](#)--but adaptation is extremely slow.

**Your Underwear Is Glowing:** Apparently *E. coli* bacteria can do many weird things, and researchers at MIT have created a material using biotech *E. coli* in what [might be the first example of semi-living clothing](#).

## 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.



If you have a good idea for a CAST publication, contact us by [clicking HERE for the "Proposal Format](#) and Background Information Form."

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Contact Colleen Hamilton at 515-292-2125, ext. 224 or [chamilton@cast-science.org](mailto:chamilton@cast-science.org), or [CLICK HERE](#) for CAST membership information.

## Societies, Companies, and Nonprofit Organizations Serving on the CAST Board of Representatives

- \* 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
- \* Croplife America
- \* Crop Science Society of America
- \* DuPont
- \* Elanco Animal Health
- \* Entomological Society of America
- \* Innovation Center for U.S. Dairy
- \* Land O'Lakes
- \* Monsanto

- \* 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
- \* Society for In Vitro Biology
- \* Soil Science Society of America
- \* Syngenta Crop Protection
- \* The Fertilizer Institute
- \* Tyson Foods
- \* United Soybean Board
- \* Weed Science Society of America

\* Western Society of Weed Science

*CAST assembles, interprets, and communicates credible, science-based information regionally, nationally, and internationally to legislators, regulators, policymakers, the media, the private sector, and the public.*

## Members of CAST's Education Program

- \* Cal Poly
- \* Cornell University
- \* Iowa State University
- \* Kansas State University
- \* North Carolina State University
- \* Texas A&M University College of Ag & Life Sciences
- \* The Ohio State University
- \* University of Arkansas System Division of Agriculture
- \* University of California-Davis
- \* University of Florida Institute of Food and Agricultural Sciences
- \* University of Kentucky
- \* University of Nebraska Agricultural Research Division
- \* University of Nevada



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**Dan Gogerty (Managing Communications Editor)**  
The Council for Agricultural Science and Technology  
4420 West Lincoln Way  
Ames, Iowa 50014-3347  
Phone: 515-292-2125, ext. 222; Fax: 515-292-4512; E-mail: [dgogerty@cast-science.org](mailto:dgogerty@cast-science.org)



**\*\* With assistance from Carol Gosteale (Managing Scientific Editor) and Kylie Peterson (Communications and Social Media Specialist)**