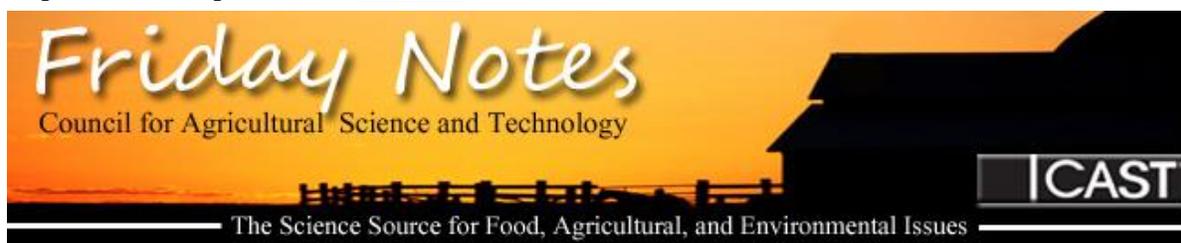


Having trouble viewing this email? [Click here](#)



*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](#)

[The Biotech Regs Paper Will Roll Out in D.C. on March 22--P. 2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)



#### Events in the Nation's Capital

Check page two (below) and [this link for information](#) regarding how you can attend a CAST presentation about the forthcoming biotech regulations publication.

#### Every Day, Every Way

Among its many goals, the USDA supports beginning farmers, and [this site provides access to its resources](#).

#### Virtual Career Fair

[AgCareers.com](#) is offering a [virtual career fair for women in agriculture](#) scheduled for April 24.



March 9, 2018

## Science, Tech, and the Food We Eat

Innovation is the life force of food production, and a recent "Possibility Report" from *The Atlantic* [highlights technologies that are reshaping food production and distribution](#). The nine feature stories include looks at robotics, drone use, waste reduction, and other agriculture issues.

*Friday Notes* regularly includes links to articles about innovation. In this issue, check out the following: In the Animal Section, university scientists are isolating stem cells to improve cattle production and study human diseases. In the Plant Section, researchers develop a "nutty" new rice cultivar. Norwegian experts use drones to attack Fjord pollution in the International Section. And in the General Section, we find out that machines are learning tasks--and possibly carrying on conversations. Maybe this explains the "creepy laugh syndrome" from Alexa.



**Will the new burger-flipping robot ask if we want fries with it? Scroll down to the Food Section for this article and more about food.**

## News and Views

**Tariff Move Brings Mixed Responses:** President Trump announced steep [tariffs on imported steel and aluminum](#) from most countries. Many agriculture groups are [critical of the move](#).

**Women in Agriculture:** The 2012 Census of Agriculture notes that nearly one million women are working America's land. [This USDA site includes some of their stories](#). And another link features [women in science, tech, and agriculture](#)--including Alison Van Eenennaam and Nina Fedoroff.



**A "Big" Difference:** Big oil and big corn tout [opposing studies on proposed biofuels policy reforms](#) considered by the administration.

**Spotting Bad Science:** These 12 points will [help you separate science from pseudoscience](#) when reading articles and evaluating research.

Check out Kylie's latest blog highlighting [three steps that will improve](#) your science communication skills.

### Ag TED Talks

View the [top 10 most recommended](#) ag-related TED Talks.

### Send 'Em In

[Click here to submit an idea](#) for a CAST publication.

### Innovation on Campus

Check out these [innovative research projects](#) awarded by a new Mississippi State College of Arts and Sciences initiative.



### CAST Social Media

Click [here for links to CAST sites:](#)

Twitter, Facebook, LinkedIn, Pinterest, videos, and blogs.

**Sworn In:** Bill Northey recently became the USDA's [Under Secretary for Farm Production and Conservation](#).

## News from the Far Side of the Barn

### Monarch Migration

**(video):** This captivating video shows [the migration of beautiful monarch butterflies](#) in Mexico.

**Cat Power (video):** This cat shows intelligence and confidence as it [frees a fellow feline](#).

**Color at Sea (video):** The natural world can be magical, as we see when this [whale seems to shoot rainbows out of its blowhole](#).



This food stylist's mission is to showcase the beauty of "ugly" fruit and veggies in hopes of [changing the way consumers view food](#).

## Biotech Regulations Publication

*Presentation and panel discussion on March 22*

On March 22, Dr. Alan McHughen--CE Biotechnology Specialist and Geneticist from the University of California-Riverside--will present highlights of CAST's Issue Paper on *Regulatory Barriers to the Development of Innovative Agricultural Biotechnology by Small Businesses and Universities*.

This Washington, D.C., event will be followed by a panel discussion. CAST will release this issue paper on that day, and it will then be available as a free download from the CAST website. [Check here for details](#).



### Biotech Info and Publicity



Before they reach the market, crops from genetically modified seeds are studied extensively to make sure they are safe for people, animals, and the environment. The [GMO Answers site explains the process and the costs](#).

The gene editing technology [CRISPR has become a household word](#), and it is showing up in TV programs, Senate hearings, and various publications.

# Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 robot pic from upi.com and veggie pic from dailymail.co.uk. P. 2 plant pic from ropella.com and dna pic from ncbiotech.org. Animal Sec. pig pic from pbs.twimg.jpg. Food Sec. rake pic from commonsenseevaluation.com. Plant Sec. cartoon from fiddlersgreen.net. Inter. Sec. plant pic from nationalgeographic.com. Gen. Sec. snake pic from reuters.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



## *Animal Agriculture and Environmental News*

**Meaty:** *Feedstuffs* provides its [meat price outlook](#).

**A Veterinarian's Viewpoint:** This writer gives [opinions about the veterinary feed directive](#) implemented more than a year ago.

**Three Articles about "Backyard Chickens":**

\*\* **Keeping It Safe:** The CDC wants the public to know about food [safety procedures involved with backyard flocks](#).

\*\* **Chickens Gone Wild.** The Texas Farm Bureau says [wild chickens are a nuisance](#)--"Eat 'em. Don't turn 'em loose."

\*\* **Raising Chickens--It's Better Than Television:** Check out this blog about [why people take up home-grown poultry](#).



Experts developed [personal pig cooling pads to help sows](#)--especially when they are feeding increasingly larger litters.

**Castration-free Pork Production:** Scientists have developed a precision breeding method that results in [male piglets that remain in a prepubertal state](#).

**Grazing on the Grass:** According to this study, cows managed under a grass-feeding dietary regime produce milk containing [higher proportions of omega-3 fatty acids](#) compared to conventional cattle diets.

**Breeding Better Bovine:** Scientists at UC-Davis have successfully [developed a system to isolate stem cells in cows](#) that could advance cattle production and improve the study of human diseases.

**Ticks, Lyme Disease, and Research:** A University of Nevada assistant professor is working to [limit organisms that spread disease pathogens](#)--in this case, the universally scorned tick.



## *Food Science and Safety News*

**The Kitchen of the Future (video):** The next time you step into a fast food restaurant, you might [feast on a burger cooked by a robot](#). This [video includes extra specifics](#) about how the machine works.

**Popcorn (video):** Did you know [popcorn was the first type of corn domesticated by humans](#)? This video explores the science and history of this salty snack.

**Spring Break Food Safety:** Whether you spend spring break partying in a city, exploring a different country, or chilling out at home, [don't let food safety take a vacation](#).

**Perspectives and Policy:** Jayson Lusk joins other agricultural and applied economists to provide ideas about how we might tackle some of society's most [difficult challenges related to food](#).

**Fat Is Back--the "Good Fat" That Is (opinion):** According to many nutritionists, fat is back in fashion--[common sense is advised](#).

**Meat-enriched Ice Cream:** Scientists are looking at an interesting solution to age-related muscle loss by [enticing the elderly to consume more protein-enriched diets](#).

**Egg Nutrition--Free Range vs. Conventional:** A recent study conducted by the USDA evaluated whether or not the [nutritional profile of an egg is influenced by the housing conditions](#) of hens.



No hot dog rakes at this website, but the [National Hot Dog and Sausage Council](#) looks at the history, "culture," and oddities of the humble hot dog.



## *Plant Agriculture and Environmental News*

**Cover Crop Research (video):** This University of Nebraska-Lincoln report examines [the results of cover-crop research conducted](#) on both corn and soybeans.

**Planting Turbines:** Iowa State researchers have found that [wind turbines located in fields are beneficial](#) to the crops growing around them.

**Nutty Rice:** Cornell and USDA researchers are [releasing a nutritious red rice cultivar](#) that should appeal to people interested in alternative grains--whole grain with a nutty flavor.

**Tobacco That Is Good for You?** Instead of cultivating the leaves to make cigarettes, researchers are finding promising ways to turn [tobacco leaves into factories for medical, pharmaceutical, and cosmetic products](#).

**Soil Health:** This USDA site provides resources designed to help visitors understand [the basics and benefits of soil health](#)--and to learn from farmers who are using workable systems.



*Tilting at Windmills--a blog looking at the [rural wind-generator trend](#). Related article at left.*



## *International News*

**Land of Ice and Snow (video):** In case you can't make it to Iceland in the near future, this [drone footage will show you](#) some of the island's natural beauty.

**Farmer's Voice (opinion):** Uganda has been a battleground for activism [regarding biotech technology](#).

**Antimicrobial Resistance (European update):** According to these findings from European agencies, antimicrobial resistance in zoonotic bacteria is [still high in people, animals, and food](#).

**Operation Weak Flesh:** Brazilian police made new arrests in an [investigation into a meat scandal](#) that erupted last year.

**Cleaning Up the Fjords:** Officials in Norway are using drones to help pinpoint litter so that human [divers can scour it off the seabed](#).



**Kleptoparasitism:** The sundew plant grows in Japanese bogs. It [steals--and eats--insects lured by the flowers](#) of neighboring plants.



## *General Interest News*

**Artificial Neuroscience:** As [machines learn to complete tasks on their own](#), researchers are working to unveil their so-called neural networks.

**National Invasive Species Awareness Week:** The University of Florida and others are [fighting destructive pest invasions](#)--snakes, fungi, beetles, and more.

**Animals and Airlines:** Airlines are using [stricter regulations for the transportation of emotional support animals](#) due to an increase in animal-related incidents and injuries during 2017 flights.

**Potential Cancer Cure:** University scientists are engineering a virus-like particle--known as Q $\beta$ --that will [generate anti-cancer immune responses](#) in the body.

**Lock Out, Tag Out Grain Bin Safety:** A University of Kentucky professor [explains helpful safety techniques](#) regarding grain bin electrical systems.

**Overstressed and Undervalued:** A recent study [found that mental wellness is a serious concern for the veterinary profession](#)--the search to help preserve the future of this profession is crucial.



A python in Florida--[big enough to eat a deer](#)--is one of many invasive species in the state. See related article at left.

## **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](mailto:kschescke@cast-science.org)). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits. 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

- \* 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
- \* Croplife America
- \* Crop Science Society of America
- \* DowDuPont
- \* 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
- \* Mississippi 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

Note: WinField Solutions (Land O'Lakes) provides sponsorship for the distribution of *Friday Notes* to the National Association of Agricultural Educators.

**Dan Gogerty (Managing Communications Editor)**  
**Kylie Peterson (Communications and Social Media Specialist)**  
**The Council for Agricultural Science and Technology**  
**4420 West Lincoln Way**  
**Ames, Iowa 50014-3447**  
**Phone: 515-292-2125, ext. 222 (Dan) and 230 (Kylie)**  
**E-mail: [dgogerty@cast-science.org](mailto:dgogerty@cast-science.org) and [kpeterson@cast-science.org](mailto:kpeterson@cast-science.org)**



**\*\* With assistance from Carol Gostele (Managing Scientific Editor)**