



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.

In This Issue..... Click to Read

[Agriculture, Students, and Resources: P. 2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)

Surfing the Northern Lights



This adventure photographer couldn't pass up the opportunity to film [surfers in frigid waves under the northern lights](#).

Resource Material

For classroom use and other school purposes, CAST offers a [broad spectrum of free publications](#) in areas of animal and plant sciences, food science and safety, the environment, biotech, and more.



Note: one-page summaries of the full papers called [Ag quickCASTS](#) [can be used as class handouts](#), and some translated versions are also available.

January 13, 2017

New Secretary of Ag

Coming soon to a government near you

By the time you read this, you might be able to fill in the blank. But as of today, Friday the 13th, no decision has been made. Many articles and editorials give a flavor of the opinions and nervousness in Ag World as this important position gets filled.



****This article says [the delay has some in agriculture concerned](#).**

****Another story explains that U.S. President-Elect Donald Trump met with the chief executives of two agribusiness giants; some gleaned [hints about farm issues and the naming](#) of a new Secretary of Agriculture.**

****And to keep grounded about the activities involved, check out the list of [news releases from the Department of Agriculture](#) in the past few days--from conservation to ethanol to nutrition.**

News and Views

****Upcoming Farm Policy:** As the full slate of [members on the House Agriculture Committee](#) comes into focus, the public gets a clearer picture of the panel that will shape the next Farm Bill.

****Farm Bill Summit:** *Agri-Pulse* plans to launch an in-depth editorial series--"The Seven Things You Should Know Before You Write the Next Farm Bill"--culminating in a [Farm Bill Summit at the National Press Club](#) on March 20.

****Gene Editing:** A new generation of crops [known as gene-edited rather than genetically modified](#) is coming to the market. Soybeans, potatoes, other plants--and even a cow's horns--have received a snip-snip. Uses and regulations are still in early stages, but this technology has wide potential.

Food Symposium

The [Global Food Security Symposium 2017](#) will showcase the best of business, social, and policy innovation--March 29-30 in Washington, D.C.

Kentucky Horses

The University of Kentucky Ag Equine Programs will host the 6th [Annual UK Equine Showcase and the 8th Annual Kentucky Breeders' Short Course](#) Jan. 27-28.

Art, Ag, and STEM

These students [add art and agriculture to the STEM trend](#)--with plans to work all these pursuits into the curriculum.

Water Lectures

At the University of Nebraska-Lincoln, [seven free public lectures](#) will delve into aspects of "the right water for the right use at the right time"--January 18.



CAST Social Media

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

****Working with the Fundamentals of Life (interview and podcast):** *New Yorker* writer Michael Specter discusses emerging biotechnologies that will make it possible to remove disease and change the characteristics of life by [rewriting the genetic code in cells](#).

****Touting Precision Ag Practices:** This writer says better allocating farm resources on an acre-by-acre basis is a key way to [use modern methods to make a profit](#).

****Communicating about Ag:** At the recent Consumer Electronics Show, the U.S. Farmers and Ranchers Alliance introduced a [new communications concept called Smart Farm](#)--aimed at bridging the gap between the acceptance of innovation that's a part of consumers' everyday lives with the science and technology happening on today's farms and ranches.

News from the Far Side of the Barn

Hey, Hey--Is the *Moana* Chicken Really That Dumb? According to this article, the world's most common bird is [actually quite intelligent](#).

Horse Play (video): Hard to say--this [horse either loves or hates](#) the squeaky chicken toy. Either way, the animal is focused.

Pregnant Dads (video): While female seahorses still produce the eggs, they transfer them to males, who [fertilize and incubate them in their pouch](#).



Hei Hei: actually smart or demonstrably stupid?

Agriculture, Students, and Resources

CAST has a long-standing interest in science and agriculture education, from elementary school through graduate programs. Along with the links posted at the top-left side of page one above, check out the following sites for resource materials and ideas:

****** Information [from member societies and affiliated organizations](#) has been compiled on the CAST website, and this link provides information about the [CAST Education Program](#).

******This article from the National Education Association says, "There's nothing new about teenagers (or adults for that matter) [finding unreliable or just plain false information on the Internet](#), but fake news--bogus or exaggerated information disguised as reliable journalism--went viral in a big way in 2016. For example, middle school students might believe "sponsored content" is a legitimate news story; high school students might accept a claim in a photo caption without verifying the source; and college students might not notice potential bias in a tweet from a political activist group.

******The [Agricultural Education Magazine](#) is a professional journal for agricultural education published under the sponsorship and control of an editing-managing board of professional educators in the field. Major aims of the publication are to unify the forces of agricultural education in the country, to serve as a means of exchanging

professional news and views, as a sounding board for new ideas, and as a source of reviews of publications and research in the field. The publication serves teachers, undergraduate and graduate students, teacher educators, supervisors, administrators, and others interested in agricultural education.

**This blogger says content that is more popular normally includes the use of images or video, evokes emotion or curiosity or humor, touches on recent or hot topics, and is easy to consume with short attention spans. He explains [how to best deal with "viral material."](#)

**Use a quick web search to access the relevant websites of quality agriculture and science university programs. We recommend any of the 14 schools who are members of CAST's education program. They all have outstanding departments and research programs.



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 northern lights pic from i.ytimg.com and chicken cartoon from ichef.bbc.co.uk. Animal Sec. sheep pic from feedio.net.jpg. Food Sec. Belushi pic from homevideos.jpg. Plant Sec. Star Trek pic from subspacemms.com. Inter. Sec. crocodile pic from i.telegraph.co.uk. Gen. Sec. robot pic from robot.jpg. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

According to Hog Farmers: U.S. pig farmers are already complying with new federal rules for on-farm antibiotic use--[this and more information gathered](#) from the National Pork Board's annual survey.

But Lawnmowers Don't Need Shearing: Sheep work like lawnmowers, making them [ideal for tackling noxious weeds](#) invading millions of acres of public and private land.

Top Dairy Stories: The National Dairy Council offers its [top 10 science-based articles about dairy foods](#) and health published during 2016.

Humane Handling and Food Safety (opinion): According to this editorial, FSIS takes humane handling seriously, but it takes food safety seriously too, and sometimes it is [tough to do both at the same time](#).



Avian Influenza: New [outbreaks of avian influenza](#) in the past few weeks have been numerous--especially in Europe--according to reports from the World Organization for Animal Health.

Dairy Care: One way the [dairy industry works for excellent animal care](#) is the National FARM Program--Farmers Assuring Responsible Management--developed by the National Milk Producers Federation.

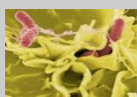
Jump-start Livestock Careers: Young people can [learn to become cattle managers](#)--with 4-H and FFA associations helping with these projects.

For the Birds: Several poultry groups made available an [updated economic impact study](#) that highlights the positive impact the poultry industry has on jobs, wages, and federal and state revenue in the United States.

Dairy Concerns: U.S. dairy groups have [raised concern over proposed changes](#) by the National Academy of Sciences in the USDA's WIC (women, infants, and children) feeding program guidelines.

Sustainable Livestock (opinion): According to Jude Capper, the trends for [improved productivity and efficiency within global livestock industries](#) are helping to reduce environmental impacts.

Note (related to above): Dr. Capper was task force chair for CAST Issue Paper #53, [Animal Feed vs. Human Food: Challenges and Opportunities in Sustaining Animal Agriculture Toward 2050](#).



Food Science and Safety News

Peanuts, Allergies, and Babies (video): New guidelines turn conventional wisdom on its head and proclaim that introducing peanut products early to infants [might prevent peanut allergies](#).

School Nutrition Trends: School lunches have long been targets of jokes, and the 2012 Congressionally mandated nutrition standards added to complaints. But some results show the [changes may be working](#).

Use It or Lose It: Some food experts and environmentalists say [people are throwing out good food](#) because of "use by" and "sell by" dates. The new phrase? "Best if used by."

Food Trend Predictions: This survey of top [dietitians and nutritionists predicts](#) the top superfoods for 2017--and many are continuations from the past few years.

In Search of the Best Sandwich in Each State: This site claims to have tracked down the [best sandwich in each of the 50 states](#)--from lobster rolls to peppered beef.

Gee--Why Can't I Pay More? This study says most consumers tend to believe that healthy foods are more expensive--and they [equate cost with taste](#).

Less Is More--Food Production: This University of Florida administrator says food production systems are facing challenges and [making more food from less land](#).

Food Waste Pyramid: The EPA's Food Recovery Hierarchy is a type of "food pyramid" that shows how to take [steps to avoid wasting resources](#). **Note:** Click here for a [diagram of the pyramid](#) (including a Spanish version).



Still working out his feelings about school nutrition standards.



Plant Agriculture and Environmental News

Soybean Sales (opinion): This report says that United States [soybean export sales are on pace to hit another record](#) again this year, in part due to high demand from China.

Star Trek Devices on the Farm: With this digital device, farmers can [scan the soil and within minutes](#) receive a readout and fertilizer advice.

Spray-on RNA to Help Plants? A [spray makes use of microscopic sheets of clay](#) into which RNA is loaded. Some think this technique could be faster and more versatile than developing GMO crops from scratch.

Mapping Out Resistant Weeds: With herbicide resistance intensifying across the U.S., it's important to [understand what herbicides work in your area](#) and how you might need to adjust in the future.

Wheat in the Dry: This soil scientist is conducting research to show Arizona wheat producers irrigation and fertilizer [practices that maximize yield and grain quality](#).

Weed Control through Engineering? A new research project is trying to prove that [robots could destroy weeds](#) better than a farmer driving a sprayer full of herbicide.

Aphids-R-Us: The [2016 Yellow Book for Soybean Aphids](#) is available as a free download. It looks at aphid treatment recommendations and application rates based on Iowa State University research.

Plant Bullets: In what sounds like a concept for a bad Banksy painting, the Department of Defense has recently put out a call for proposals for [manufacturing biodegradable bullets that also contain seeds](#).



Yes, captain, according to my calculations, we need more fertilizer on ten acres of corn in the north forty.



International News

Unbearable--Bear Bile and Farming (videos in links): This blog includes updates and background [information regarding the farming of bears](#) in Asia.

Eye in the Sky: The AgriDrone from Japan can pinpoint good grazing areas [using video analysis software](#). It also sends real-time alerts when animals leave a designated area or if a predator approaches.

A Load of Croc: These [Australians farm crocodiles](#)--and their "livestock" are destined to become luxury handbags, belts, wallets, and shoes at Europe's biggest fashion houses.



Anybody have a toothpick? I have some feathers in my teeth.

Water Works: The World Bank has developed an interactive knowledge base about [photovoltaic water pumping](#)--water systems that help in many villages and small towns in various countries.

Global Pig Farming: This article offers insights into techniques used at [various pig farm systems](#)--with a focus on Asia.

More Than the Usual "Chicken of the Sea": A Japanese sushi chain made a winning [bid of \\$632,000 for a very large bluefin tuna](#) at the opening day of the 2017 session at the famed Tsukiji fish market.

Tuna and Over Fishing (opinion): This article looks at the [environmental side of tuna fishing](#)--and the scarcity in many once-vibrant fishing areas.

Jersey Cows in Rwanda: A new project will help Rwanda's dairy industry by providing thousands of straws of Jersey bull semen to be sent to the African country to [help breed more productive animals](#).

India and the Gene Revolution (opinion): This farmer says his home country is [denying itself a new wave of miracle crops](#) for reasons that have nothing to do with science and everything to do with politics.

Positive Signs in Fight against Ebola? Using a Canadian vaccine, the World Health Organization conducted a large-scale inoculation in Guinea and Sierra Leone to assess how well it [protected people against Ebola](#).



General Interest News

Farming the Future Panel Discussion (video): At the 1st Annual Chicago Food Tank Summit in November, the more than 40 [speakers included researchers, farmers, chefs, policymakers, and students](#).

Wind Flips Truck (video): A [tractor-trailer truck gave into the sustained winds](#) blowing as high as 100 mph along this Colorado interstate.

Mr. Roboto on the Farm: This year's RoboUniverse event in San Diego included a full day dedicated to the [application of robotics to agriculture](#).

Sunny Side Up: Cornell University now [milks the sun for energy](#), with three new solar farms that will generate large amounts of electricity and help the campus achieve its carbon neutrality goals.

Challenged by Food and Water Issues: These MIT engineering students are seeking to [solve major food and water security problems](#).



The new constant gardener.

Children's Ag Book Honored: The American Farm Bureau Foundation for Agriculture presented its 10th "[Book of the Year](#)" award to Eugenie Doyle for *Sleep Tight Farm*.

Mailing to SNAP Users: Amazon and [online grocery services will soon accept food stamps](#).

New Animal Species: Hairy-chested crabs and monstrous slugs are among the [six new species of marine animals](#) found living near the hydrothermal vents beneath the Indian Ocean.

Running Clock with Fascinating Stats: The "[world real-time clock](#)" includes statistics dealing with everything from mortality to food to beer production. For example, Earth includes more than 380,000 centenarians.

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."](#)

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

Colleen Hamilton at 515-292-2125, ext. 224 or 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 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
- * California Dairy Research Foundation
- * Council of Entomology Department Administrators
- * Croplife America
- * Crop Science Society of America
- * DuPont
- * Elanco Animal Health
- * Innovation Center for U.S. Dairy
- * Monsanto
- * 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
- * United Soybean Board
- * Weed Science Society of America
- * Western Society of Weed Science
- * WinField, a Land O'Lakes Company

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)
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



**** With assistance from Carol Gostele (Managing Scientific Editor), Hannah Pagel (Student Administrative Assistant), and Mikayla Dolch (Student Administrative Assistant)**