

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 the CAST organization.

In This Issue..... Click to Read

[Ag Giving, Scientific Thinking, and Family Communing--P. 2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)



Goodnight Moon

This site provides [excellent photos of the recent supermoon](#), and this blog links to more photos--and a look at [a special flaming moon down on the farm](#).

Ag Day Photo Contest

The Agriculture Council of America is looking for an original photo to be used on the [2017 National Ag Day Poster](#). The theme is "Agriculture: Food for Life," and the submission deadline is December 15.

New Aggie Complex

Texas A&M University's new \$120 million [Veterinary and Biomedical Education Complex](#) has been formally opened.

Biotech Summit

November 18, 2016

Genes and Machines

Science transforms food production and health



Technology and innovation continue to transform the world of agriculture. These five links provide a glimpse at some of the latest developments:

Chinese scientists are the first to use the revolutionary CRISPR-Cas9 [gene-editing technique in humans](#). Genetically modified cells were injected into a patient with aggressive lung cancer.

Blind animals have had their [vision partially restored using a revolutionary DNA editing](#) technique that scientists say could eventually be applied to a range of devastating genetic diseases.

The [new age of farm machines](#) includes weeding robots, self-driving tractors, and crop-spraying drones.

Some say the [miniaturization of farm machinery](#) will help encourage small, diverse farms--an autonomous machine called Rowbot can fertilize, mulch, and sow crops.

The Foundation for Food and Agriculture Research announced the first [recipients of its New Innovator in Food and Agriculture Research Awards](#). Winners come from various universities including Cornell, UC-Davis, North Carolina State, and Kansas State.

News and Views

****Crystal Ball Regarding New Administration and Ag:** An ag expert looks at [seven key takeaways about issues](#) farmers can expect Washington to consider in the months ahead as the new administration takes hold--from trade and biofuels to the Farm Bill and other topics.

The Forum of Scientific Society Leaders on Genetically Engineered Crops will host a [symposium on December 7](#) at the National Academy of Sciences Building in Washington, D.C.

Diggin' in the Dirt

The National Academies' U.S. [National Committee for Soil Sciences](#) hosts a [one-day workshop](#) intended for decision makers, members of the public and private sectors, and those interested in the latest soil research. Speakers include Pedro Sánchez and Susan Trumbore. Join in person or by webcast--Washington, D.C., on December 5.

Send 'Em In

If you have a blog entry you wish to share with CAST members, send it to dgogety@cast-science.org.

CAST Social Media



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

Note: the next *Friday Notes* edition will be sent on Dec. 2.

****Reflections and More Projections:** This Ohio State University expert looks at [historical perspectives and current political positions](#) regarding farm policy and the upcoming Farm Bill process.

****Farm Debt Rising:** Betting the farm on record crop, livestock, and dairy prices has [turned into a losing investment](#) for an expanding share of America's agricultural heartland.

****SNAP--with a Bit of Crackle and Pop:** The House Agriculture Committee wrapped up its long-running--and sometimes contentious--examination of the [Supplemental Nutrition Assistance Program](#).

News from the Far Side of the Barn

Nothing Runs Like a Deer Breaking Bad (video): A cross country runner gets [obliterated by a speeding deer](#).



Bovine vertigo.

Would It Fit in My Home Aquarium? (video): Divers off the coast of Portugal captured [incredible footage of a giant sunfish](#).

Quake Leaves Cows Up in the Air (video): Three New Zealand cows looked like they could use a little help after an earthquake triggered landslides and left them [stranded on a small island of grass](#).

Giving, Thinking, and Communing

Three items of note...

#CAST4AgScience

As Giving Tuesday approaches, CAST evokes the spirit of Norman Borlaug and works to communicate credible ag/science information. [Visit the donation site here](#).



Post Screening Quotes--Food Evolution

Renowned scientist Neil deGrasse Tyson, who narrates *Food Evolution* (not yet widely released), said after the screening, "[Science is true, whether or not you believe in it](#)." He went on to say, "If people knew how to understand and process data, and think about it, we wouldn't even need this film." Alison L. Van Eenennaam, an expert in animal genomics and biotechnology, agreed that the best thing to do is to examine the evidence objectively. She said that people should look at the studies and trust leading scientific organizations when they all find the same results.

Reflections on a Big Beautiful Family

As we approach the season for holiday gatherings, Hannah's latest blog considers why the tangled webs of [extended families can be so rewarding](#). As one family member pointed out, in a big family you learn to accept

diverse points of view and how to respect and honor others' beliefs. "Growing up with multiple siblings also helped me learn that hand-me-downs were really not that bad either."



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 moon pic from washingtonpost.jpg and cow pic from theherald.com.au. Animal Sec turkey pic from pbstwing.com. Food Sec. chicken pic from scienceblogs.jpg. Plant Sec. slime pic from abcnews.go.com. Inter. Sec. raptor shirt from etsy.com.jpg. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Plenty of Gobblers This Year: Contrary to last year, when avian flu wreaked havoc on U.S. turkey production, there apparently are [no supply issues now](#), according to this market source.

Pork Strength: September was another [solid month for U.S. pork exports](#) as totals soared above year-ago levels, according to statistics released by the USDA and compiled by the U.S. Meat Export Federation.

Got Milk for a Long Time: Humankind has gulped down mouthfuls of milk and other dairy products from animals--such as sheep, goats, and cows--[for at least 9,000 years](#), a new study suggests.

Looking at Meat Trends: According to this analysis, [increasing red meat supplies](#) are challenging the marketing chain to adapt.

Enzyme Power: Enzymes have [proven their potential to release more nutrients](#) from conventional and nonconventional feed ingredients--and to lower the negative effects of anti-nutrients present in these raw materials.

Chicken Scratchings: This farmer's blog looks at [ten tips for raising backyard chickens](#)--and she claims the birds are hypnotic.

Gene Repurposing: Researchers report that a gene involved in bone growth and muscle functions in mammals may also [play a role in brain development in humans](#) and their primate cousins.

Pig Therapy: The decisions a pig makes are [governed by its mood and personality type](#), according to this British research. Getting the pigs to lie on a couch and be psychoanalyzed must have been tough.



Not easy [being the chosen one](#), but this turkey hopes a presidential pardon is on the menu.

Misclassification Mistake (opinion): The world's most respected database of endangered species is [underestimating the risk of extinction](#) to many animals around the world, according to this article.



Food Science and Safety News

Rotten Food and Preservatives (video): This TED-Ed host discusses [spoilage caused by microbes and oxidation](#)--and the pros and cons of the preservatives used to combat them.

Poached, Boiled, Scrambled, or What? (video): This rather long clip goes deep into the [art of how to cook up delicious eggs](#) in many ways.

A Reason to be Grateful: Thanksgiving meals in the United States [will be less expensive than a year ago](#), according to an annual American Farm Bureau Federation report.

Fatty Things That Might Be Good for You: Diets rich in [omega-3 fatty acids may help healthy young people](#) avoid the onset of high blood pressure, according to this report.

Biotech Regs (opinion): The American Seed Trade Association argues that [genome editing is crucial](#) to food production and regulations should be limited.

Beyond Kimchi and Kale: Millennial foodies are [challenging the supply chain](#) from farm to table.

Science Proves the Chemistry between Salt and Grapefruit: Ad campaigns from decades ago tried to convince us that "[Grapefruit Tastes Sweeter with Salt!](#)"

A Claim Sure to Raise Debate: According to this food site, Los Angeles is the [best eating city in the United States](#).

Nuts to That: It is becoming the season for chestnuts roasting on an open fire, but many of the "nuts" we eat are [nothing of the sort](#).



"I came first." "No, I did." "No way--I did." "Oh yeah, who says?" "I do."



Plant Agriculture and Environmental News

Addressing the Threat: This research looks at [algal blooms in the Gulf of Mexico](#) and possible solutions for the complex problems involved in this issue.

First Flight Powered by Wood Waste: An Alaska Airlines flight took off from Seattle and landed at Washington Reagan National Airport in what the USDA is calling a [breakthrough in bioenergy](#).

Cornhuskers and Sorghum: Corn-based ethanol is the most common biofuel, but the University of Nebraska is leading a \$13.5 million multi-institutional [research effort to improve sorghum as a source](#).

California County Votes on Biotech: Sonoma County voters appear to have [banned genetically modified crops](#) in unincorporated areas of the county.



As Kermit the Frog knows, sometimes it's not easy being green.

Fighting a Wheat Blight: A major breakthrough in the cloning of a resistance [gene to eliminate wheat scab](#) has been achieved by a multi-institutional team of researchers.

Big OK on Cotton: Oklahoma farmers are poised to make one of their [best cotton crops ever](#)--despite a season that started with weather challenges and included big losses to bacterial blight in some areas.

The Microbe That Could Fight Fires: Scientists are cultivating a [bacteria to thwart the invasive cheatgrass](#) that fuels western wildfires.



International News

Food and Nature in the English Countryside (video): Anthony Bourdain escapes from the city to visit celebrity chef Marco Pierre White's [hotel in the English countryside](#)--and he learns how White "fell in love with nature."

Trade Tussle? (opinion): This report says Canada's softwood [lumber and livestock producers](#) are being targeted by the Trump transition team who are advising the president-elect to extract terms more favorable to the United States.

Don't Stick Your Hand in the Raptor Cage (video): A Japanese company unveils life-sized, human-controlled robotic dinosaurs, and a [Jurassic Park-type theme park](#) is in the works.

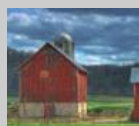
Milk NOT Linked to Heart Risk: Researchers in Spain participated in an international [study that has debunked the association](#) between dairy products and increased cardiovascular risk.

Bird Flu in Europe: Germany is considering ordering its [poultry farmers to keep their flocks indoors](#) following an outbreak of bird flu in the country. The H5N8 virus has also been found in several other European nations.



Falling Short So Far? (opinion): Researchers from the United States and France have calculated the level of [emissions reductions necessary from agriculture](#) to meet the Paris Agreement.

Deflating Gassy Cows in Oz: Research in Australia indicates that adding small amounts of a seaweed plant to animal feed [reduces methane emissions](#) by up to 80%.



General Interest News

Stopping Zika--In a Fashionable Way: North Carolina State researchers are finding [solutions to protect people from Zika-infected mosquitos](#)--and participants include textile engineers, technologists, designers, and entomologists.

Q and A with Randy Krotz: Food Tank recently interviewed Randy Krotz--CEO at U.S. Farmers and Ranchers Alliance--about [food production, innovation, and regulations](#).

Issues and Analysis (podcast--opinion): This *AgWired.com* segment features discussions about a [controversial animal rights proposal](#), Oklahoma's defeated Right to Farm legislation, and other farm issues.

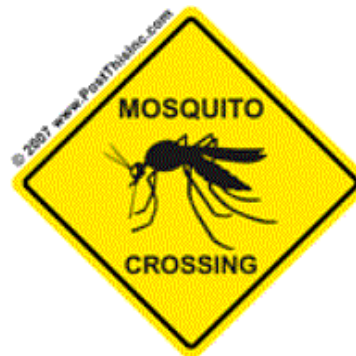
Ag Professor with a Mission: This assistant professor at Iowa State Univ. leads an ISU-based center with the mission of helping fruit and vegetable growers across the Midwest [improve the safety of their operations](#).

Measles and Vax: CDC estimates about the impact that vaccination against measles has had in the world are [both encouraging and breathtaking--but](#) there were still 367 deaths every day in 2015 from the disease.

Awards Program for Sustainability: The food and beverage industry gets [recognized for programs and projects](#) that focus on pollution prevention, conservation efforts, recycling initiatives, and more.

Snake Radar: Humans are [specially wired to spot snakes](#) quicker than any other animal, a study has found.

Worms that Farm: Scientists have discovered that the [marine ragworm grows its own food](#) from seed.



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 Pioneer
- * 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
- * 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)**