

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.

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A Full, Solstice, Strawberry Moon

Astronaut Jeff Williams took this [photograph of the rare Strawberry Moon](#) as he was orbiting Earth in the International Space Station. For more [about moon phenomena, check out this blog.](#)

Food Waste Conference

Harvard will host the *Reduce and Recover: Save Food for People* conference on June 28. Click here to access the book [Food Waste Across the Supply Chain: A U.S. Perspective on a Global Problem](#) from the University of Pennsylvania and CAST.

FFA New Horizons

This woman explains the ways FFA can [ignite passions and careers.](#)

The Fourth of July

June 24, 2016

Fly the Friendly Skies?

Drone use regulations affect agriculture

The Federal Aviation Administration has apparently finalized the first operational rules for routine [commercial use of small unmanned aircraft systems](#), opening pathways toward fully integrating drones into the nation's airspace.

[Unmanned Aerial Systems have spurred controversy](#), according to this *Farm Journal* report. Many in ag support it, saying it could take precision agriculture to the next level, while some are a little more cautious.

Unmanned Aerial Systems might make farming more productive, sustainable, and safe--but this blogger says he is glad they did not have "[Big Brother Drones](#)" when he was a kid playing in barns, creeks, and pastures.

The Obama administration green-lit commercial drone flights but said it wasn't ready to let Google and Amazon launch [automated drone delivery fleets out across urban areas](#). However, as this blog points out, someday a company will probably be able to [deliver a pig to your doorstep](#).



Unmanned Aerial Systems could have a big impact on precision agriculture.



Not a real flying pig--yet.

News and Views

****GMO Label Update:** Senate Agriculture Chairman Pat Roberts, R-KS, and ranking Democrat Debbie Stabenow of Michigan [reached a deal on GMO labeling](#). The legislation, which will need 60 votes to pass the Senate, would nullify Vermont's first-in-the-nation GMO labeling law and would bar any other state from enacting labeling requirements that differ from the federal standards.

****Genome Editing and Humans:** A federal biosafety and ethics panel

The next *Friday Notes* edition will be available on July 8. Happy Independence Day weekend.



CAST Material Available

The latest [CAST Publications Catalog](#) is available here.

Share Our Story

This is an opportunity for FFA Chapters, 4-H clubs, and collegiate student organizations to spread the word about the [important role agriculture plays in our everyday lives](#) by working with local elementary classrooms.

Food Science and Tech Educational Opportunities

UC-Davis has developed cutting edge educational [opportunities in the area of sensory science and consumer testing](#)--with graduate professional-level courses in the Applied Sensory and Consumer Science Certificate Program.



CAST Social Media

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

unanimously approved the [first study in patients of the genome-editing technology CRISPR-Cas9](#)--an experiment that would try to create genetically altered immune cells to attack three kinds of cancer.

****Call for Ag Research:** A group of scientists went to Washington, D.C., to call for an increase in federal [support for food and agricultural research](#).

****Teen Perceptions and Ag Jobs:** A [recent online survey of 500 teens](#) revealed several interesting facts: 94% felt farmers are hard workers, but only 15% thought farmers were technologically advanced, and 34% thought farmers work alone. In the United States, 98% of people have no direct connection to agriculture, and that seems to be showing up in youthful opinions. One of the key messages at the recent gathering at [Fair Oaks Farms and the WinField Crop Adventure project](#) is that there are good paying jobs in agriculture--and for people who get science, technology, engineering, or math degrees.

News from the Far Side of the Barn

Enormous Bugs: Meet the [giants of the insect world](#). At right, a couple of giant spiny stick insects--in case you want to get a few, they are officially called *eurycantha calcarata*.



How Big Can Bug Nests Actually Get? (videos): [Insects can build mega mansions](#)--such as wasp nests, termite colonies, and massive ant hills.

Smartest Bugs in the World? (video): Apparently [some insects can count](#), recognize human faces, and even invent languages.

Water Issues Continue to Flow

Conservation measures by farmers have reduced [nitrogen and phosphorus runoff in Iowa and other states](#) in the Upper Mississippi River Basin, according to a federal government study released this week. Some are hopeful that farmers can continue to install practices that will help with water quality, while others say relying on voluntary action by producers or spending money to try to encourage them to use conservation practices will not be enough.

This agriculturalist [encourages such conservation practices](#): "One of the great attributes of a no till farming system is the ability this type of crop production system provides to manage water. Future generations are depending on us to use this valuable resource wisely."

In California, 40% of agriculture is still irrigated by pouring water onto farmland, a much less efficient practice than [drip and overhead irrigation](#). But those numbers are changing, according to this writer.

Cities across the United States are taking various [measures to combat stormwater runoff](#) and reduce pollution in local bodies of water, while raising awareness of the issue.

A new type of farm has been established in Kansas with a primary focus on water conservation in addition to crops and livestock. The [Three Water Technology Farm](#) has been created recently in response to public input and identified in the *Long-Term Vision for the Future of Water Supply in Kansas* (Water Vision).

CAST experts have produced several papers researching water quality issues. Check out the following Ag quickCASTs:

Assessing the Health of [Streams in Agricultural Landscapes](#): *The Impacts of Land Management Change on Water Quality*

Water and Land [Issues Associated with Animal Agriculture](#): *A U.S. Perspective*.



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 moon pic from huffingtonpost.com, drone sprayer pic from gsmcneal.jpg, pig drone pic from foodbev.com, and insect pic from atlasobsura.com. Animal Sec. horse pic from dailyhaggis.jpg. Food Sec. fair pic from ameseatsflavors.jpg. Plant Sec. veggie art pic from art_foxnews.com. Inter. Sec. cartoon from hexapodcast.blogspot.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Family Dairy Roots (video): These young farmers understand the challenges their ancestors faced when they started. They have [built their dairy from that solid foundation](#).

Labels, rBST Milk, and Common Sense (opinion): This [dairy farm blogger looks at labels, cow care, and farmer choices](#); do consumers look beyond the label to decide for themselves about claims?

Beef Futures: This Kansas State University expert looks at how the North American beef industry can best be [positioned for success over the next 20 years](#).

Pork in the Courts: An Illinois [court ruling sided with a commercial hog-feeding operation](#) that had been sued by residents.

Pork in the Courts--Again (related to above): A federal court in North Carolina has decided to let a potentially game-changing [lawsuit against an 8,000-pig farm](#) to go forward.

Raising a Stink? (opinion): Some claim that Iowa's [hog confinement loopholes](#) are hidden problems.

Egg Production: In 2015, the [top ten egg-producing companies](#) in the world were located in six countries: the United States, Ukraine, Mexico, Saudi Arabia, Japan, and Thailand.

Great Plains Grazing: Researchers and extension specialists are working to safeguard and promote regional beef production while [mitigating its environmental footprint](#).

Pork Trade (opinion): This expert believes buoyant Chinese [pork imports will persist](#) until the end of 2016.

Overview of Dairy and Beef Markets: The [impact of dairy on beef markets](#) varies over time, depending on long-term trends and short-term market conditions.

A Horse Is a Horse--of Course, of Course: The controversy about [horse meat and slaughterhouses](#) continues.



What would Mister Ed say about the controversy?



Food Science and Safety News

Omega-3 Intake (opinion): A new world map of omega-3 levels shows consumption is too low in many places to prevent [cardiovascular and cognitive health issues](#).

It Ain't Health Food on a Stick! The Iowa State Fair released the [list of crazy new foods](#) to try--including jalapeno double bacon corn dogs.

Beef Industry Appeals to Millennials: Seven organizations have zeroed in on a third of the U.S. population in a digitally savvy campaign to [get young people cooking with beef](#).

Electric Chocolate? New research suggests candy companies may be able to make [lower fat versions of the tasty treat](#) with a little electrical trick.

The Way Americans Eat Is Becoming More Divided (opinion): More people are eating [healthier but the gap is widening](#) between rich and poor.

Millennials as Chocoholics? Millennials supposedly care about the social and environmental implications of the food they eat, but [when it comes to chocolate](#), stand back.

Grocerants: The hybrid of grocery stores and restaurants [could be the future of food shopping](#).

Bizarre Food Facts: These [odd tidbits](#) about food might satisfy your hunger for knowledge--or they might prompt you to look them up to verify the "facts."



If it ain't on a stick, it ain't real food.



Plant Agriculture and Environmental News

New Veggies Anyone? (video): This start-up wants to put [vegetables you have never heard of](#) on your dinner table--from fairy tale eggplants to unusual carrot and squash varieties.

Wildflower Power: From prairies to roadsides and bogs to hillsides, [wildflowers provide vital food and habitat](#) for wildlife and pollinators--they are an essential part of ecosystems.

Soybeans on the Move: In the 2014-15 marketing year, about 59% of total U.S. soybean production was [exported to international markets](#)--more than 2.3 billion bushels with a value of more than \$24 billion.

Plant Health: A University of Florida researcher says a new test could save time and money [diagnosing plant viruses](#), some of which can destroy millions of dollars in crops each year in Florida.

Blooming Algae: Eutrophication is a process where [fertilizer stimulates dense marine and fresh water plant growth](#)--an example was the 2014 Lake Erie algae bloom that affected drinking water.

Algae Projections (related to above): An extension educator says the harmful algal bloom in the Western Lake Erie Basin is [projected to be smaller this year](#)--she encourages best management practices used by farmers.

Algae Research (related to above): Check out the [CAST Commentary Benefits of Controlling Nuisance Aquatic Plants and Algae in the United States](#).

Biofuel Research: A University of Arkansas professor received a National Science Foundation grant to study the [harvesting of biomass from perennial plants](#) for the purpose of creating a source of renewable energy.



Dessert art--made from veggies.



International News

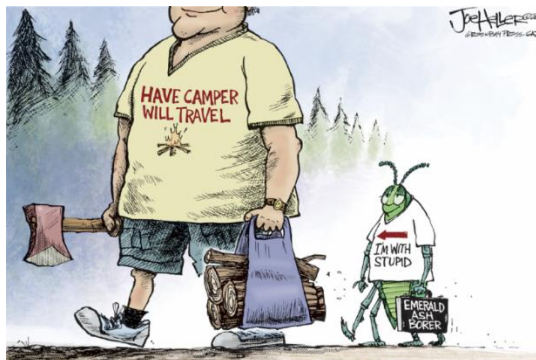
Greenhouse Gas Injections (video): A pilot program at an Icelandic geothermal power station seeks to tackle climate change by [injecting greenhouse gasses](#) into the ground for permanent storage.

Brexit Vote and Agriculture (developing story): The UK has voted to leave the European Union, and this article provides a first look at [reactions from food and farming organizations](#) in the UK and beyond.

Moving In: Invasive [insects and pathogens could be a multi-billion-dollar threat](#) to global agriculture, and developing countries may be the biggest target, according to a team of international researchers.

Dutch Dairy Delight: The Floating Farm in The Netherlands will be [home to 60 urban dairy cows](#) that will produce local milk, cheese, cream, butter, and yogurt.

Poor Economy Leads to Food Woes: Economic conditions in Venezuela have become so bad that Venezuelans are [ransacking grocery stores](#)--even though many are largely empty.



Some say campers and firewood choppers have aided the emerald ash borer invasion.

Cuban Coffee: Nestle's Nespresso announced it will become the first company to [import Cuban coffee to the United States](#) after more than 50 years.

Cattle Health: Beef producers in Uganda's Karamoja region have benefited from a [livestock vaccination plan](#), spearheaded by the Food and Agriculture Organization.

Guac-loving Hobbits, Maybe? Someone is [stealing avocados in New Zealand](#) by driving up to orchards in the dark of night and using rakes to sweep hundreds from trees.

Million-dollar Melon: Looking like a delicious bowling ball, a [rare black watermelon](#) was put up for auction in Japan, with the winning bid coming in at approximately \$4,700.



General Interest News

The Dance of the Hummingbird (video): When you see a hummingbird, you can only really watch them hovering around. It is more fun to see slow motion of the [cool things their wings can do](#).

Connecting with Audiences (podcast): Two farmer/communicators discuss how to blog and use video to [explain agriculture to wide audiences](#).

Faces of Farming (video): This farmer [explains some realities of today's agriculture](#)--and he is a contestant in USFRA's *Faces of Farming* contest.

Neural Nets (video): [Artificial intelligence](#) is borrowing biological solutions that worked for human intelligence.

The Science of Cold Cooked Meats: Two North Carolina State University educators developed an [extension charcuterie school](#) that is drawing plenty of attention.



[Ryan Goodman blogs](#) about farming and food.

Reaching Rural Veterans: With the help of the University of Kentucky and others, food banks in five Kentucky counties are [conducting outreach programs](#) and providing services for veterans.

Green Partnerships: This seventh-generation farmer became passionate about the environment at Cornell University and now has created a business model that uses [partnerships to create green energy](#).

Geese Boom: Big flocks of snow geese flying over the Midwest each spring and fall may make for a pretty picture, but the booming population of those noisy birds is [creating an environmental problem](#) in Canada.

Bee Health: The USDA and others have begun an unusual [partnership that may help honey bees](#) take another step up the survival ladder, as they study the success at Geezer Ridge Farm in West Virginia.

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, or [CLICK HERE](#) for CAST membership information.

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