

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.

In This Issue..... Click to Read

[Ag Couple Profiled as Members Month Continues--P. 2](#)

[Animal Agriculture News](#)

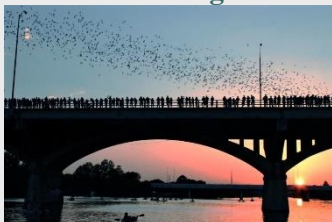
[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)

Bat Bridge



Hundreds of [tourists and thousands of bats](#) gather daily at Austin's famous Congress Ave. Bridge.

Streaming Food Evolution

The acclaimed documentary *Food Evolution* will have its TVOD/Streaming launch on [August 29th](#). And in this interview, the film's director and writer give [behind-the-scenes insights about the movie](#).

CRISPR Conference

About 500 people gathered at the UC-Berkeley campus to assess the [rapid adoption of gene editing techniques](#). Check this second article for [insights from a professor, a hog farmer](#), and others.

Note: Check next week for information about the upcoming **Genetic Editing in Agricultural**

August 25, 2017

Agricultural Research

University scientists look for the next breakthroughs

Universities are gearing up for the chaos and excitement of a new semester, but in reality, educational pursuits are constant. Research is a key ingredient of that quest for knowledge, and agriculture often benefits from campus-based inquiry. CAST is [linked with many schools](#) known for their excellence in science and agriculture.



Bee research at the Univ. of Florida

Friday Notes features links about university research and development on a regular basis in various sections of the newsletter, and here are three examples:

- (1) Researchers at the University of California-Davis joined other prominent scientists to [map the "jumping genes" of maize](#), one of the world's most important crops.
- (2) Farmers work hard to keep viruses and aphids out of their fields, but Iowa State University scientists are hoping to [engineer these harmful agents](#) so they actually can help crops.
- (3) The University of Florida features a bee expert and a team of specialists who conduct [basic and applied bee research](#) to improve beekeeping across the world.

***Note:** [Click here for free access](#) to the CAST Commentary *Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It*.

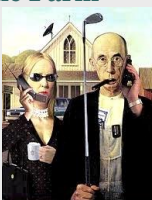
News and Views

NAFTA in the Spotlight: According to the American Farm Bureau Foundation president, agriculture will be front and center in the [North American Free Trade Agreement negotiations](#), and he says trade agreements generally have a good track record of opening international markets for U.S.-grown products.

Biotechnology Roundtable that will be hosted by the American Bar Association, the American Agricultural Law Association, and CAST.

Online on the Farm

A USDA report shows that [farm access to the internet is increasing](#). Nearly 73% have computer access--and it's growing.



STEM at the University Level

With the assistance of grants from the National Science Foundation, two University of Nebraska-Lincoln researchers are conducting interdisciplinary studies designed to [improve collegiate education in science](#), technology, engineering, and mathematics.

Hands-on Science

These Cornell University students worked to create interactive exhibits that allow children to experiment, analyze, and [think independently about science issues](#).

CAST Social Media

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

Food Safety Modernization Act: Some officials are eager for [FDA guidance on safety rules](#). Feed mills, grain processors, and other facilities involved in supplying animal feed face upcoming compliance dates for regulations intended to prevent the spread of toxins, pathogens, and other sources of contamination.

Food Labels: Professor Kent Messer joined other experts to compose a paper about the "[good, bad, and ugly](#)" of labeling food processes.

***Note:** [Click here for free access](#) to the CAST Issue Paper *Process Labeling of Food: Consumer Behavior, the Agricultural Sector, and Policy Recommendations* (Task Force Chair--Kent Messer).



Science Acceptance, Education, and

Trust: This study found that education doesn't make much of a difference when it comes to accepting science. Ultimately, [the thing that matters most is trust](#).

News from the Far Side of the Barn

Go Jump Off a Cliff (video):

In case you're tired of lounging by a pool on vacation, [grab a wingsuit and head for Norway](#).

How Does Your Garden

Grow? (video): An 84-year-old was reunited with her engagement ring when her daughter-in-law found it in the garden--[wrapped around a carrot](#).



A Carat in a Carrot

Parody in the Lab (video): Oklahoma [veterinarian students get their Beyoncé on](#) as they gear up for another year of research and study.

Lifetime Members of CAST

Their country elevator grew into an animal nutrition company

Gary Lortscher and his wife Betty of Bern, Kansas, purchased the family's country elevator in 1975--Lortscher Agri Service, Inc., founded in 1948 by his parents Dave and Marjorie Lortscher. In 2012, Lortscher Animal Nutrition Inc. was created to help evolve as an even stronger animal nutrition provider.

"On that day in 1975, we became quite involved in agriculture," explains Gary. "An analysis of the agricultural industry in our county did not bode well for a small country elevator at the time. Nonetheless, we plundered ahead with minimal revenues." Even though times were tough and profits were marginal, Gary and Betty chose to support, as a company, two entities--one was the Council for Agricultural Science and Technology (CAST).



Lifetime members of CAST, Gary and Betty saw their involvement as an opportunity that they could not miss out on. "We saw CAST as a respected entity in aiding our Congress in their drafting of regulatory requirements and in being a reliable source of information for customers. Now, these many years later, we still see CAST accomplishing these functions. Congratulations to CAST!"

[Click here to access the entire blog.](#)

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 pic of researchers from [ufnews.atavist.com](#), bat bridge pic from [austinmonthly.com](#), American Gothic parody from [njit.edu](#), and carrot pic from [outbrain.com](#). Animal Sec. fish pic from [ars.com](#). Plant Sec. veggie pic from [internapcdn.net](#). Inter. Sec. cartoon from [google.com](#). Gen. Sec. firefighters pic from [firehouse.com](#). Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Beef Demand (audio): A livestock market economist says there's still a strong demand for high-quality beef, and he thinks producers can use that opportunity to [manage risk and add profitability by using better genetics](#).

Salmon Lost at Shore: This week's solar eclipse is being blamed for the [escape of thousands of farmed Atlantic salmon](#) into the Pacific Ocean.

Backyard Poultry Warning: So far this year, preschoolers account for a third of the 961 confirmed [victims in a Salmonella outbreak](#) that has turned deadly and been traced to backyard poultry flocks.

Mystery Meat? A California-based startup developing technology to grow [meat from self-reproducing animal cells](#) raised \$17 million in funding from investors that included big companies and famous entrepreneurs.



Fish have ears? Scientists explain why [farmed salmon are more likely to be deaf](#) than their wild relatives.

Keeping Track of Hog Diseases: The Swine Health Information Center has funded a near real-time [monitoring system for swine diseases](#) around the world.

Have Hooves, Will Roam: This government report estimates that [200,000 wild horses, burros, and mules](#) roam free on federal and tribal lands.

This Is Your Brain on Dairy: Specialists are creating a "virtual dairy farm brain" that will collect and integrate a farm's data streams in real time and then use artificial intelligence to [analyze the data to help farmers](#).



Food Science and Safety News

Should It Stay or Should It Go? (video): Globby eye shadow? Green, fuzzy cheese? Smart labels are going to tell you [when to toss makeup items and aging food](#).

A Merger Reimagines The Food System (video): Amazon combined with Whole Foods means bigger, more "futuristic" programs--including "Dash Wand," an [interactive magnet on the fridge](#).

Inspection Time: This USDA report covers the federal government's [inspection procedures performed](#) by FSIS personnel in federally inspected establishments to determine whether or not the facilities meet regulatory requirements.

Chemical Ingredients 101: Why are ingredient labels so complex? Here are a [few examples of chemical compounds](#) included in everyday products and the benefits they provide.

Research Communication (audio): According to a recent study, 62% of adults get their news through like-minded people on social media, while scientists work toward [consumer trust through communication](#).

Food Preservation: Explorers in the Antarctic have [discovered a 106-year-old fruitcake](#) that makes the food industry's eyes light up--in a scientific, not culinary, sense.

Monthly Meal Planning: Meal planning is a great tool that saves time and money, and it [helps prevent poor food choices](#).



Cal Poly announced a new graduate fellowship program specifically focused on the [global reduction of food waste](#).



Plant Agriculture and Environmental News

Apple Trees--History and Trends (video): Research tells the story of the apple's evolution on the historic Silk Road, and looks at new insights into applen genetics that [could be a major boost to apple breeders](#).

Chemigation and IPM: This grower is trying to [use integrated pest management \(IPM\) to eliminate pests](#) without harming the friendlies--using a technique called chemigation.

Promising Irrigation Systems: Some irrigation companies are trying to combine the [advantages of drip irrigation](#) with the convenience of center pivot systems.

Positives and Negatives: This study indicates that the [Renewable Fuel Standard brings a net positive](#) to the U.S. economy but fails to reduce greenhouse gas emissions globally.

Protecting Water Quality (opinion): This study says that applying manure to fields by means of [shallow disk injection into the soil](#)--rather than traditional surface broadcast--reduces estrogens in surface runoff.

Epigenetics (opinion): Epigenetics, the [manipulation of plant DNA without permanently changing it](#), can be applied in an advantageous way to many plants, according to this University of Nebraska professor.

Energy Help from Kelp? Researchers are working on what they hope will become an [energy source of the future](#)--macroalgae, otherwise known as kelp. It can grow 2 to 3 feet a day in the open ocean.



Colored pigments in plants attract insects, protect against disease, and [perform many other beneficial functions](#).



International News

Biotech Bananas (video): Bananas genetically modified by Queensland researchers to be [vitamin A-enriched](#) are being grown in Uganda--a breakthrough focused on saving the lives of east African children.

A Cheesy Superfood? (opinion): Researchers in South Korea claim that Swiss cheese [might be healthier](#) than other cheeses.

Biodiesel Import Duty: Subsidies provided for biodiesel production in Argentina and Indonesia run afoul of international trade rules. The U.S. Commerce Department slapped a [duty on imports](#) from the two countries.

Afghan Wheat: Afghanistan's Ministry of Agriculture is working with a Nigerian company in hopes of [developing self-sufficiency in wheat production](#).

Farming in Elephant Country: Elephants [kill approximately 60 people](#) every year in India's forested eastern state of Jharkhand.

Crop Production and Protection: This Spanish farmer speaks about the [innovations available worldwide](#) that he and his colleagues need to help feed the growing population.

****Related to Above:** Check out the recent CAST Issue Paper, [Crop Protection Contributions toward Agricultural Productivity](#).



German police said a truck carrying [22 tons of Nutella and other chocolates](#) was stolen.



General Interest News

Skywriting or Sky Graffiti? (video): A new app lets users [write messages or post photos in the sky](#). Anyone with the app can then point their phone skyward to see what other users have left there.

A Need for Veterinarians (opinion): Some former USDA officials say the federal government is [critically short of veterinarians](#)--and this could affect food safety.

Veterinary Genomics: This Texas A&M University professor looks at the [history of veterinary genomics](#).

Cleaner Water: This [wastewater treatment system runs on algae](#) grown on vertical belts that rotate in and out of the wastewater--nitrogen and phosphorus are transferred from the wastewater to the algae.

More Than Just a Walk in the Woods: Nature [advocates recommend forest bathing](#) as a means to calm down and enjoy life.



Seven out of 10 American firefighters are volunteers--and many [help with emergencies in rural areas](#)--they are needed now more than ever.

Dog Years to Human Years: According to the American Veterinary Medical Association, [the math is more complicated](#) than you might think.

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.

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- * 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
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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



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