

# Friday Notes

Council for Agricultural Science and Technology

ICAST

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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## Firefall



During a few weeks each February, the Horsetail Fall in Yosemite National Park [glows like orange lava](#) as the setting sun makes the phenomenon known as "firefall."

## New CAST Trustee



[Dr. Mike Strain](#)--Commissioner of the Louisiana Department of Agriculture and Forestry--has joined the CAST Board of Trustees. Welcome!

## National Ag Day

This Agriculture Council of America website provides information about [National Ag Day](#)--March 21, 2017.

## Biofuels Workshop

Ohio State and Iowa State experts will speak at an upcoming workshop

February 17, 2017

## Sell By, Use By, Bye Bye?

*Hoping for clarity and waste reduction*

In an effort to simplify food purchases and reduce food waste, grocery manufacturers and retailers launched an industry-wide [effort to adopt standard wording on packaging](#) about the quality and safety of products. As reported by Sara Wyant in *AgriPulse*, the new system proposes just two standard phrases--rather than the ten different date labels now on packages. As Emily Broad Leib--director of the Harvard Law School Food Law and Policy Clinic--says, "We waste about 40% of the food we produce. The single most cost-effective [solution is standardizing and clarifying date labels](#)."



CAST has published several papers about food labels including [Process Labeling of Food: Consumer Behavior, the Agricultural Sector, and Policy Recommendations](#).

## News and Views

**\*\*California Dam Update:** The rain has started to return in northern California, but officials aren't as concerned about the upcoming weather so much as the [damage already done](#) to the Oroville Dam's compromised main spillway. Meanwhile, southern California braces for the [biggest storms in years](#).

**\*\*CRISPR in Court:** The U.S. patent office ruled that [hotly disputed patents on the revolutionary genome-editing technology](#) CRISPR-Cas9 belong to the Broad Institute of Harvard and MIT, dealing a blow to the University of California in its efforts to overturn those patents. The case might be appealed.

**\*\*Ag Optimism:** Agricultural producers' [sentiment continues to improve](#) according to a Purdue/CME Group Ag Economy Barometer.

in Ohio [about biobased fuels and products](#).

### Food Security

The [Global Food Security Symposium](#), Stability in the 21st Century, will showcase business, social, and policy innovation-- Washington, D.C., March 29-30.

### Weed Science Award

A Mississippi State graduate student is the Southern Weed Science Society's selection for the [Outstanding Graduate Student](#) award for the state.

### Searching for Ag Instructors

Education officials and FFA enthusiasts point out the [need for more certified agriculture education instructors](#) in Wisconsin--and around the country.



Pinterest, LinkedIn, videos, and blogs.

### CAST Social Media

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

Facebook,

**\*\*Ag Challenges:** The House Ag Committee kicked off discussions ahead of the upcoming Farm Bill debate with a [hearing about the rural economy--and the challenges it is facing](#).

**\*\*Battle over Public Lands:** Many land managers, conservationists, and sportsmen groups are [pushing back against the notion of land transfers](#).

## News from the Far Side of the Barn

### Skijoring in the Old West

**(video):** Cowboys and skiers cross paths in Jackson Hole while participating in the sport of Skijoring. The race consists of an adrenaline packed 15-20 seconds where a [skier gets pulled behind a horse](#), reaching speeds of up to 40 miles per hour while maneuvering various gates. This [video shows a similar event](#) in Leadville, Colorado.



Not sure what the horse thinks, but it looks like fun.

**Special Delivery (video):** Pearl, a rescued goat from Tennessee, has [formed an unlikely friendship](#) with a local UPS delivery man.

**Scales, Stingers, and Slimy Things (video):** A [night walk in the Costa Rican jungle](#) can mean army ant bites, giant cockroach stabbings, and close encounters with venomous snakes.

## Agriculture, Science, and Student Challenges

## Science Is the Key

The [LiveScience site](#) features science and agriculture stories--ranging from biotech to seed storage to antibiotics...and even a look at farming on Mars. Check [here for general science](#) articles; [here for agriculture](#) stories; and [here for strange news](#) items.

## Student Debt a Dream Crusher

For many young people trying to start their own farm, [student debt can put their dreams on hold](#). The average age of American farmers--58 in 2012--keeps ticking upward. Many in the Midwest fear there aren't enough new or young farmers entering the evolving field, but the nature of modern farming has made it tough for a new generation to get started.

## Appealing to Rural Students

Young people [from remote parts of the country](#) face special challenges in furthering their education, and these six students talk about why (or why not) college is a good choice. This Texas A&M recruiter says that rural students bring "a unique perspective" to campus, and their school has special [programs to get them to their campus](#).



Check out the ag/science opportunities at these 14 highly respected universities.

## Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 firefall pic from cnn.com and the skijoring pic from denverpost.jpg. Animal Sec. dairy pic from twitter.jpg. Food Sec. child pic from businessinsider.com. Plant Sec. citrus genome pic from nationalgeo.com. Inter. Sec. Whale Rider pic from movieposter.com. Gen. Sec. biker pic from npr.org. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



## Animal Agriculture and Environmental News

**Just Caring for My Pigs (video):** This Illinois farmer has been raising pigs for more than 50 years, and he believes it is his responsibility to [provide the best care to each animal](#).

**Finished and Ready for Market? (video):** This professor of animal science discusses [aspects of cattle finishing](#) and how that has changed over time.



**Tech and Ag:** This Cal Poly ag student explains how emerging technologies will affect agriculture in the long run to [optimize management and profitability](#); a current example--robotic milking machines.

**Global Pig Production:** This Chinese company is supposedly [preparing its pig farmers for the future](#) by using a training center. And this article looks at the [latest hog production research](#) in Denmark.

**Red Angus Trend?** According to this article, [Red Angus are the hottest thing on the market](#) right now, bringing a premium in the feeder cattle market--especially for females.

**Insights about the Veterinary Feed Directive:** This livestock [specialist debunks five myths](#) heard since the Veterinary Feed Directive took effect January 1.

**Certified Turkeys:** The Shady Brook Farms brand is the first line of [turkey products to earn the Certified Responsible Antibiotic Use](#) designation--complying with school food requirements.

**TB Resistance from Gene Editing:** Researchers in China have reported creating [tuberculosis-resistant cattle using CRISPR/Cas9](#) genome editing.



Milking practices have come a long way.



## *Food Science and Safety News*

**Shaka Shaka Chicken or Prosperity Burger, Anyone? (photo article):** These 17 items are sold in fast-food [locations around the world](#).

**Vitamin D Dose?** USDA-ARS research shows a higher dose of vitamin D [may benefit pregnant women](#) by reducing inflammation. And in another report, researchers pooled data from 25 studies that included more than 10,000 participants--looking at [whether or not vitamin D supplements cut the number of infections](#).

**Fighting Hunger (opinion):** This writer says SNAP and other anti-hunger programs are vital to [ending hunger in America](#).

**The First Cut Is the Deepest:** This blogger [explains the different cuts of beef](#) consumers encounter at the grocery store or butcher shop.

**Oyster Power:** Some think of oysters as "romantic," and these University of Florida food specialists [explain the science background](#) to the story.

**Keeping It Safe (related to above):** Oysters as aphrodisiacs? Maybe--especially for the rats in the study--but the [key point is food safety](#) with the tricky seafood items.

**Celiac Sufferers, Yes--Others? (opinion):** The gluten-free trend continues to grow, but [scientists have yet to solidly back up the need](#), and new research hints that the diet may pose some unexpected problems.



No need to enter hyperspace to get McMeals that are "other worldly."



## *Plant Agriculture and Environmental News*

**Innovation Helping the Environment (video):** Precision agriculture and new sprayer technology is [helping farmers use less herbicide](#) because they are placing only the correct amount where it is needed.

**Food Heroes (photo profiles):** Without farmers, there would be no food. But not everyone is aware of [the role plant scientists play in helping](#) those farmers feed the world. This site features farmers and scientists.

**Citrus Genome:** Almost all citrus has the rare genetic combination of being sexually compatible and highly prone to mutation. Oranges, lemons, limes, and grapefruits are [descendants from just a few ancient species](#).

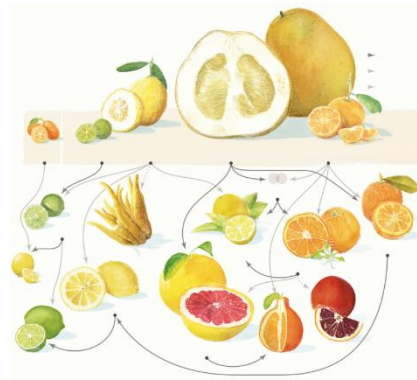
**Corn Genome:** This study from Cornell University analyzed close to 4,500 maize varieties--bred and grown by farmers from 35 countries in the Americas--to [identify more than 1,000 genes driving large-scale adaptation](#) to the environment.

**Biotech Explanations (opinion):** This renowned UC-Davis plant geneticist explains how genes control resistance to disease and tolerance to environmental stress. She also [discusses science, fake news, and why the term GMO is meaningless](#).

**Ethanol Booming--Cellulosic, Not So Much:** The ethanol industry [topped the 15-billion-gallon mark in 2016](#), its largest production ever, and it could set an even higher mark this year.

**Biochar Research:** The University of Nevada and others are [studying biochar production](#)--this carbon-rich material is used for soil reclamation, ag production, and carbon sequestration.

**Free the Seeds:** While crop residue breaks down to provide additional nutrients, it can also impede seed success if not managed correctly. This site provides [tips for conventional and no-till seedbed establishment](#).



Using genetic research to chart the lineage of the citrus genus.



## *International News*



**Beached Whales and Rescue Attempts (video):** Volunteers and conservationists in New Zealand endured frigid temperatures to [help hundreds of beached pilot whales](#) return to the water--but [many eventually died](#).

**This 2002 [award-winning magic realism film](#) looks at Maori traditions and the spirit of whales in New Zealand.**

**Corn Demand:** According to this report, [China will consume more corn](#) in 2016/17 than previously forecast as demand for the grain in livestock feed will rise after China slapped anti-dumping duties on U.S. distiller's dried grains.

**Cold Snap Pears:** This hybrid Canadian fruit--more than four decades in the making--is [disease resistant and can last longer](#) in cold storage.

**Winds of Change:** These [offshore wind farms](#) could make a big impact off Denmark and near Liverpool, England.

**A Smartphone Calorie Counter:** The world's first material-sensing smartphone will supposedly [tell you how many calories](#) you're about to eat--it will launch in China later this year.

**Koalas "Up a Tree":** For the first time, red foxes in Australia have been documented climbing trees [to look for baby koalas](#) and other unsuspecting creatures to munch on.

**One "Bloody Awful" Pest:** British scientists have discovered why [the green peach aphid is one of the most destructive](#) pests to many of the UK's most important crops.



## *General Interest News*

**Feature--Livestock, Disease, and Messaging:** As many as 79 people died from H7N9 bird flu in China recently, stoking [worries that the spread of the virus](#) this season could be the worst on record. Asia's hunger for meat could [increase diseases if unregulated](#), warns a UN specialist. Another official says the world is now in uncharted territory when it [comes to infectious diseases](#). However, this writer is more [skeptical about the slant and motives](#) of generalized statements concerning livestock production and pandemics.

**Cycling Centenarian:** This 105-year-old cyclist has captured the imagination of longevity lovers and fitness buffs--and his physiology might [help rewrite some scientific expectations](#).

**Dinky Drones (brief video):** A tiny insect-sized drone has been designed to [artificially pollinate plants](#)--bees need not worry, as it is still experimental.

**Toxic Bottom Dwellers:** Large amounts of toxic chemicals that were banned in the 1970s have been discovered in the bodies of sea creatures living [at the bottom of the deepest ocean trench](#) in the world.

**Big Data Ag:** According to this analyst, [Big Data is reshaping farming](#) "from the outside in." Data collected at all levels--from outer space down to ground level--is helping improve the agriculture industry.

**Ag Is Everywhere:** This Texas A&M extension representative says we all eat and wear clothes, so [we are all involved in agriculture](#). He also points out that agriculture is the nation's largest employer.

**Canine Shelters:** A recently completed study by two researchers in Mississippi State University's College of Veterinary Medicine brings American [animal shelter canine populations](#) into sharper focus.



**Sacré bleu--A 105-year-old Frenchman [sets cycling record](#).**

## 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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