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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.

March 10, 2017

Trying to Keep the Tap Flowing



Farmers, environmentalists, and politicians often deal with the rising tide of water controversies. [This blog site provides links](#) to two current news items (WOTUS and the Clean Water Act), a science-based research paper, and a short visit to a meandering pasture creek. Access to safe water is a global concern, but in this edition we look at a few of the many U.S.-based stories, editorials, and reports that flow by every week:

Some states receive the majority of their precipitation during the winter months. [Snowpack is a major source of drinking and irrigation water](#) for many Americans.

These Iowa State University scientists believe algae can help cut costs for hundreds of small towns that face expensive upgrades to their wastewater treatment as they [meet tougher clean water standards](#).

In this podcast, a Maryland farmer talks about how he uses the latest innovation and technology to be more sustainable--including insights about what farmers are doing to help with the [water quality issues of Chesapeake Bay](#).

News and Views

****Biotech Tidal Wave:** A profusion of biotechnology products is expected over the next five to ten years, and the number and diversity of new products has the potential to overwhelm the U.S. regulatory system, says a [new report from the National Academies of Sciences](#).

In This Issue..... Click to Read

[Plant Breeding and Innovation--P. 2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

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A Lava Firehose



A section of sea cliff above a massive "firehose" lava flow on Hawaii's Kilauea Volcano has collapsed and splashed into the ocean. [More photos here](#).

Rollout Event

[Click here or see page two below](#) for information regarding CAST's upcoming seminars about innovation, plant breeding, and genetics.

Forests and Energy

On each International Day of Forests--this year on March 21--countries are encouraged to undertake local, national, and international efforts to [organize activities involving forests and trees](#).

Wooly Bully



The University of Kentucky is hosting a shearing school for [beginning and experienced shearers](#) March 21-22.

Water in the Classroom

The University of Nebraska-Lincoln will support a 15-month sustained professional development program for secondary [STEM teachers focused on teaching and learning about water resources](#).

Raw Milk Workshop

The American Dairy Science Association offers a [workshop about the impact of raw milk](#) on dairy products--June 25 in Pittsburgh, Pennsylvania.

Aggie Competitions

The Texas A&M [Beef Quiz Bowl team](#) placed at the Nationals, and the school's [livestock and wool judging teams](#) also brought honors back from their contests.



CAST Social

Media

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

Pinterest, LinkedIn, videos, and blogs.

Engineering, and Medicine.

****Comments from the EPA Head:** New EPA leader [Scott Pruitt speaks about carbon emissions](#), the environment, and growth.

****Organic, Conventional, Dirty Dozen or Not--Eat Your Veggies:**

Research shows that inaccurate reports about pesticide residues can have a negative impact on whether or not people [consume the daily recommended amount of fruits and vegetables](#). Carl Winter (UC-Davis food specialist and CAST's [2012 BCCA winner](#)) concludes that the level of pesticides consumers are exposed to via the "dirty dozen" is negligible. One thing all agree on: [Eat your fruits and vegetables](#).

****Philosophy from the Plains:** The popular Peterson brothers from Kansas dissect [17 myths about agriculture](#), and their many [parody song videos](#) are available at this YouTube site.

News from the Far Side of the Barn

Stan The Bulldog and Romeo

The Iguana (video): An [odd friendship indeed](#), but the world needs all the positive vibes it can get.



Romeo might not be as cool as these lounge lizards, but he and Stan have a chill bromance.

A Sea Turtle Named Omsin--the Thai Word for Piggy Bank

(video): Thai veterinarians [removed 915 coins from a 25-year-old sea turtle](#) that had been swallowing items thrown into her pool for good luck, eventually limiting her ability to swim.

There Goes My Dream of a Burger-flipping Career (video): Flippy, a new ["robotic kitchen assistant"](#), apparently can take orders and flip burgers, with the help of its thermal sensors and various cameras.

Plant Breeding and Genetics Paper *The Need for Agricultural Innovation*

CAST is releasing an issue paper titled *Plant Breeding and Genetics--A paper in the series on The Need for Agricultural Innovation to Sustainably Feed the World by 2050*. Dr. Stephen Baenziger and Dr. Rita Mumm, who cochaired the team of authors, [will present the highlights and key findings of this paper at three venues](#) in Washington, D.C., on Wednesday, March 22, 2017.



10:00 a.m.--11:00 a.m.
328A Russell Senate Office Building
Constitution Avenue and 1st Street NE

Noon--1:00 p.m.
Lunch Seminar, 1310 Longworth House Office Building
1 Independence Ave SE

2:30--3:30 p.m.
ASA, CSSA, and SSSA Science Policy Office
502 C St. NE

Food Evolution

Impressive Documentary Takes on the GMO Food Controversy

From Academy Award®-nominated director Scott Hamilton Kennedy and narrated by esteemed science communicator Neil deGrasse Tyson, *Food Evolution* is set amidst a polarized debate marked by fear, distrust, and confusion: the controversy surrounding GMOs and food. Alison Van Eenennaam and other experts contribute to this thought-provoking film. The feature is being [shown at various places in the country--including Washington, D.C.](#), as part of the "Science in a Time of Change" program on Friday, March 17.

Farming and the NCAA Basketball Tournament

Check out Hannah's blog about the eight [reasons why farming is like March Madness](#)--think of risks, referees, and slam dunks.



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 lava pic from usgs.gov, water tap pic from growlermag.com, sheep pic from timedot.jpg, and lizard pic from digg.com. Food Sec. strawberry pic from cbsnews.com. Plant Sec. Mr. Potato Head pic from youtube.jpg. Inter. Sec. monkey pic from blog.nature.org. Gen. Sec. fire pic from epacha.org and couple pic from newswest9.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

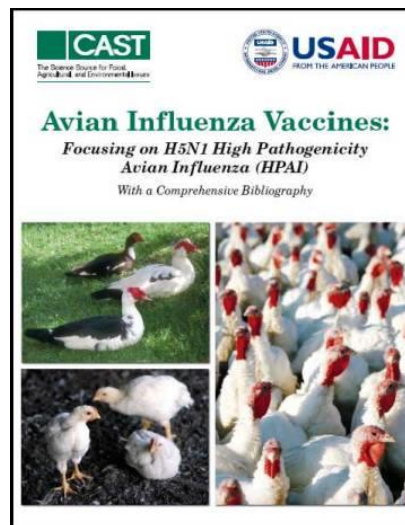
The Real Paw Patrol (video): Elite [skydiving dogs are trained to sniff out poachers](#) that are killing elephants, rhinos, and other protected animals. The dogs pin poachers to the ground until more help arrives.

Avian Flu: Highly pathogenic H7 [avian flu was found in Tennessee](#), and 73,500 chickens were destroyed. The USDA says this virus is genetically distinct from the China H7N9 lineage that has infected both poultry and people in Asia. [The strain found in Tennessee is not a risk to humans](#).

Waterfowl Warning (related to above): University of Kentucky specialists say that the H7 virus is a North American strain that is of wild lineage, meaning [waterfowl could be a source of it](#).

Poultry Biosecurity (related to above): A South Carolina veterinarian is [urging anyone with chickens](#) to intensify biosecurity after bird flu was confirmed in Tennessee. **NOTE:** See the Inter. Sec. for more links related to the avian flu situation.

Dairy Proposals: The National Milk Producers Federation Board [approved changes to the Margin Protection Program](#) that will restore several key elements first proposed during development of the 2014 Farm Bill.



This [special report examined AI vaccine use](#) ten years ago.

The Power of Meat: The "Power of Meat" [study revealed consumer trends](#) and confirmed that American consumers want to know the story behind the meat they purchase.

Beating Swine Disease: A DNA-copying protein from a lethal pig virus has a unique structure that may offer a target for drugs [designed to combat African swine fever virus](#), according to this study.

Bovine Tuberculosis: This chronic and slowly progressive cattle disease emerges periodically in the United States, as it has with a [recent discovery in a South Dakota cattle herd](#).

Upcoming Pork Industry Leaders: The National Pork Board announced Kyle Coble from Minnesota, Logan Thornton from Idaho, and Madison Schafer from Minnesota as the [inaugural Pig Farmers of Tomorrow](#).

A Lotta Bull: USDA scientists are providing a genomic database of U.S. beef cattle online. The [complete genomes of 96 bulls](#) represent different U.S. cattle breeds, including Angus, Brangus, and Hereford.



Food Science and Safety News

Food Deserts in Los Angeles (video): Two entrepreneurs in California saw the situation as both a social problem and a business opportunity. They think [everyone deserves access to healthy, fresh, delicious food](#).

Making Fruit Last Longer (video): This FDA-approved, organic material apparently [extends the shelf life of many fruit items](#). Some call it "the biggest revolution since the refrigerator."

The Little Light--Might Stay On (related to above): Scientists from Singapore explain how violet [light kills Salmonella in the refrigerator](#). The study was limited, but results could help battle foodborne illnesses.

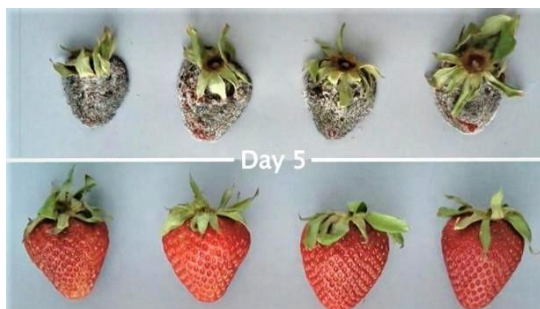
Food and "School Learning": This blog from the USFRA Food Dialogues site explains what the writer [wishes she would have learned in school about agriculture](#).

Fruit "Sugar Phobia" Misguided? (opinion): IFIC food experts say the [fruit items we eat contain a wide variety of nutrients](#) that are vital, and generalized messages demonizing the sugar they contain are misleading.

Know Your Khachapuri from Your Kalettes: This piece from *The Guardian* is billed as the ultimate [hipster food glossary](#).

Could Japanese Be the Next Greek When It Comes to Yogurt? A Japanese dairy giant is [entering the U.S. dairy market](#) with the launch of its ALOVE aloe vera yogurt.

Food Data Bank: North Carolina State Univ. is helping with an interactive dashboard project to study [where state residents are buying local foods](#) and how much they spend on them.



Pass the strawberries--hold the mold and rot.



Plant Agriculture and Environmental News

Social Climbers Groping in the Dark (video): Vines are antisocial climbers. They send out tendrils to taste nearby plants--identifying and then [steering clear of weak-stemmed varieties](#).

Handle with Care (opinion): The [EPA approved the use of dicamba formulations](#) on tolerant soybeans and cotton. This Univ. of Arkansas expert joins others in giving insights about the caution and care needed.

New Data about Spray Application (related to above): Specialists from the Univ. of Nebraska and Mississippi State Univ. [provide timely information](#) about glyphosate-dye applications in soybeans.

Biotech Hybrid Spuds Come on the Market: Researchers [release 15 new potato varieties](#)--genomic tools are increasingly used to identify favorable traits and speed up the breeding process.

Not Used Just for Shade and Climbing: The World Farmers Organization takes an extensive look at its view of sustainable [forestry used for food security and nutrition](#).

Land--Prices, Tech, Programs (opinion): This university professor gives ten [highlights every farmer should know about land](#) in 2017.

Explaining Plant Growth: University researchers have developed a mathematical equation for leaf mass area that will [help to determine what drives plant behaviors](#) based on their cells.



The awkward early trials of genetic editing for potatoes.



International News

What a Wonderful World (video): This BBC clip from a few years back uses David Attenborough commentary and [cool nature shots to remind us of Earth's beauty](#).

Avian Flu Trade Effects: South Korea, Japan, Taiwan, and Hong Kong have [limited imports of U.S. poultry](#) after the United States detected its first case this year of avian flu on a commercial chicken farm.

Avian Flu in Europe? (related to above): Greece has reported [Europe's first outbreak](#) of the highly pathogenic avian influenza strain H5N6.

Food Trends: This site pinpoints [six of the must-know food, nutrition, and consumer trends](#) taking shape in Japan--from superfoods to sports nutrition.

Crop of the Future? New, [stress-tolerant rice varieties](#) can help make farmers more resilient against the increasingly destructive effects of climate change, says this crop expert from the Philippines.

Cutting Corn: China, the world's second-largest producer and consumer of corn, will [continue to reduce corn stockpiles](#) and acreage as part of reforms that also include seeking self-sufficiency in rice and wheat.

Cocoa Crisis: Much of the world's cocoa comes from West Africa, and a [dip in global prices creates a crisis](#) for Ivory Coast farmers.



Knows how to rock a Fu Manchu mustache.



General Interest News

Buff and Active Robot (video): This robotics company officially [unveiled its latest model](#), and the 6-foot-6 machine looks as if it could handle hay bales on the farm--but probably not hand milking the Guernsey.

Wildfire Horror (video): At least [six people have been killed](#)--including a couple trying to save their cattle--and thousands have been forced from their homes as wildfires raged across Texas, Kansas, and Oklahoma. Note: [Update on the tragedy here](#).

Fire on the Plains (video--related to above): Numerous cattle were killed, as [wildfires swept by high winds](#) threatened numerous towns across southern Kansas.

Influential Agriculturalist Dies: Clayton Yeutter, a former U.S. secretary of agriculture, died at the age of 86. University of Nebraska-Lincoln chancellor Ronnie Green said, "[America and Nebraska lost a giant](#)."



Wind-driven prairie fires turn tragic.

Fish Farming: Aquaculture farmers in the United States face regulatory hurdles when dealing with fish waste,

but research shows that a simple, organic system can [clean aquaculture wastewater effectively](#).

A Bounce from That Waste? Food waste [can partially replace the petroleum-based filler](#) that has been used in manufacturing tires for more than a century, according to these scientists.

The Buzz on Getting Nutrients from Waste: Cornell researchers are investigating a system for using [housefly larvae to biodegrade manure](#) and then harvest the larvae for use as protein-rich animal feed.

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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- * Monsanto
- * National Corn Growers
- * National Pork Board

- * North Carolina Biotechnology Center
- * North Central Weed Science Society
- * Northeastern Weed Science Society
- * Poultry Science Association
- * Society for In Vitro Biology
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