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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 CAST.

January 26, 2018

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Riding the Wave



Portugal gets some of the world's biggest surf in January, and this surfer caught a terrifying giant.

Ag Ambassadors

The National Teach Ag Campaign seeks outstanding agricultural education majors to represent the profession as [National Teach Ag Ambassadors](#) at the 2018 National FFA Convention & Expo.

Climate and Coral

Researchers at The Ohio State University and their colleagues demonstrated [how climate change is weakening coral reefs](#).

Celestial Event

Big Changes in Grocery Buying

"Just Walk Out" system is latest in digital revolution

The extreme makeover in the grocery world continues. Stores offer self-checkout machines; online ordering and home delivery systems are popular; and now a [newly opened Amazon market](#) does away with checkout procedures. Using hundreds of ceiling-mounted cameras and electronic sensors, the store tracks customers and the items they select. Purchases are billed to customer credit cards when they leave the store. This "Just Walk Out" system is based on intricate digital methods and the premise that many people want to shop quickly and with minimal human interaction. [Click here to access links](#) about the new devices and social implications these changes are bringing.



Yes, son, I love this new way of shopping, but I wonder what they mean when they say 'smartphone app' or 'digital billing.'

News and Views

The 2018 Farm Bill: This relatively brief document from the Trump Administration and USDA Secretary Perdue lists [ideas designed to influence the drafting of the Farm Bill](#).

Technology and Food: A [special report launched at the Davos World Economic Forum](#) found that technology start-ups related to food systems are attracting only a fraction of the capital of those in the health sector. Advocates hope that technology can help transform food systems.

U.S. Census of Agriculture: Farmers received a hefty, white envelope at the turn of the year. [Not only is it an important civic duty to fill out and return, it is illegal to ignore it.](#)

Smart Farm and Ag Tech: The Smart Farm Initiative at UC-Davis addresses grand challenges in agriculture--[using technology to increase the production of food and renewable energy](#) in the face of a changing climate.



The first "[super blue blood moon](#)" in 150 years will occur on January 31.

Ag Students and Jobs

Mississippi State University will host the sixth annual [Future of Agriculture Graduate Student Competition](#) on February 8.

A Fishy Study

This Cornell University fish study might help identify [genes that regulate social behaviors](#).

CAST Social Media



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

Twitter, Facebook, LinkedIn, Pinterest, videos, and blogs.

News from the Far Side of the Barn

Treating Turtle Tumors (video): At the Turtle Hospital in the Florida Keys, [sea turtles receive a new form of chemotherapy treatment](#) for tumors--with the help of veterinarians at the University of Florida.

Pig Zen (video): There is no science-based material about this procedure that we know of, but some say the "forking method" [helps calm pigs down](#).



Pass the Pepto-Bismol: German researchers have developed a [robot prototype small enough to move around in a human stomach or urinary system](#). "Is my stomach rumbling, or is my robot just restless?"

CAST Connections

Borlaug CAST Communication Award

The BCCA nomination deadline is February 5. [Check here for details](#). This award has become an influential component in the efforts to keep agricultural issues and programs in the public eye and in front of national and world policymakers.



Submit an Idea

CAST welcomes [suggestions, ideas, and recommendations](#) for future CAST publications and projects.

Reduce, Reuse, Recycle: Farmer Style

Farmers take many steps to protect the land, water, and air around them for the well-being of their communities, their animals, and their families. Everyone knows the value of recycling, but farmers often find unique and creative ways to recycle in order to save both money and materials. Many farmers go above and beyond with their recycling efforts, not only because it often helps them meet their equipment needs in a sustainable way, but because they want to pass on the best possible farm to the next generation of agriculturalists.

[Visit this CAST blog](#) to get a glimpse into the many ways farmers reduce, reuse, and recycle.



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 wave pic from dailymail.co.uk, moon pic from in5d.com, shopping collage includes pic from pinterest.com, and pig pic from youtube.com. P. 2 bag pic from creativecountrylife.com. Animal Sec. tortoise pic from radiotimes.com. Food Sec. graphic from nprnews.org. Plant Sec. grain bin pic from whio.com. Inter. Sec. bird pic from belfasttelegraph.co.uk. Gen. Sec. robot pic from foodtank.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Monkey Monkey (video): For the first time, scientists say they [created cloned primates](#) using the same complicated technique that made Dolly the sheep in 1996.

5-Hour Energy (video): [This veterinarian has just the solution to perk up calves born in winter months](#) during a rough delivery.

Hog Processing Rules: Federal government regulators proposed [changes in the way most hogs slaughtered for meat](#) in the United States are processed in a series of new rules--opinions differ about the impacts of such moves.

Comment Period about Rules (related to above): This USDA site explains the rules and provides [a link for those wanting to make comments](#) about the hog slaughter proposals.

Cock-a-doodle-doo: [A rooster's crow is so loud it can deafen you if you stand too close.](#) So how do birds keep their hearing?

Gene Editing and Livestock (audio included): In this interview, Alison Van Eenennaam discusses the potential advancements of using [gene editing for livestock breeding](#).

Rumen Research: This scientist researches [how the microbial enzymes and metabolites found in a cow's stomach](#) might benefit animals, humans, and the planet.



[A legend in the field of nature documentaries](#), Sir David Attenborough's "Blue Planet" segments show that "animals have stories to tell."



Food Science and Safety News

More Than Steak (video): Ranchers in West Texas [provided local culinary students an up-close look at](#) what goes into cooking the perfect steak.

The EPA and Livestock Emissions: The EPA filed a motion to extend the stay for 90 days regarding [mandatory reporting of manure-based ammonia or hydrogen sulfide emissions](#) from certain barns and manure storage facilities.

Food Irradiation: This overview examines why [more food was irradiated in 2017](#) than in any previous year.

What's in a Name? Panera Bread has petitioned the FDA to establish a [clear definition for the term "egg."](#)

Banned and Approved for Organic? The [USDA proposes changes](#) to the "National List" for organic producers--public comments are now accepted.

Egg Storage Safety: Wondering if you should store your eggs at room temperature or in a refrigerator? [This article provides you with a simple answer.](#)

Forget Spinach (video): Extra virgin [olive oil is even better for you than researchers originally thought](#) and could be the key to a healthier life.



Desires for a [unique nutrition blueprint in our genes](#) have spurred growth in personalized nutrition testing--but others just advocate eating a healthy diet.



Plant Agriculture and Environmental News

Dicamba Ruling: Arkansas [banned the use of dicamba between April 16 and October 31](#) this year.

Response to Ruling (opinion--see above): This [response letter](#) is about the use of dicamba-tolerant products.

The Microbes beneath Our Feet: A tablespoon of [soil contains billions of microscopic organisms](#)--and food production depends on these microbes.

Soil and Fertilizers (opinion--related to above): Farmers enact many [practices that improve the soil](#), but often they need to use fertilizer as an amendment.

Crop Mix Intentions: As [farmers look for ways to improve profitability in 2018](#), *Farm Journal Pulse* asked what percentage will make crop changes this year.



A [grain silo collapse](#) sent 10,000 tons of corn onto an Ohio roadway.



International News

Flavor of Food (video): [How food tastes is not just determined by the ingredients.](#) A London professor is trying to see how big a role perception plays in flavor.

Elephant-human Showdown (video): Nearly 800 people have been killed by elephants during the past decade as growers of world-famous Assam tea are encroaching into forests, fueling a [conflict between elephants and humans.](#)

Banned in China, But OK in USA? U.S. food and environmental authorities approved the use of a [Chinese strain of genetically modified rice.](#)

Agripreneur Farmers in Nigeria: This article touts Nigeria's amount of arable land, large youth population, and [potential to feed a hungry world.](#)

Biotech Regs: Australia is set to reform [how it regulates new genetic engineering techniques](#)--experts say this will help speed up health and agriculture research.



Murmuration in Ireland--a large flock of [starlings swoop in choreographed movements](#) to elude an attacking falcon.



General Interest News

The Spread of "Hippie Food": A new book examines the people and places that [brought organic vegetables and whole wheat bread](#) into the counterculture and, eventually, mainstream supermarkets.

Country Road, Take Me Home (video): Did you know [the patchwork grid you see from an airplane window or a drone video](#) as you fly over the Midwest was implemented by Thomas Jefferson?

Better-behaved Students: New research finds that [third-graders are more attentive after experiencing a class taught on the lawn.](#)

Zombie Pathogens: Some fear that a possible consequence of climate change could be "zombie pathogens"--[bacteria and viruses preserved for centuries in frozen ground](#) and coming back to life as the Arctic's permafrost starts to thaw.



From seed to table, a revolution in technology that prioritizes [robotics and automation could transform agriculture](#)--experts debate what the effects might be.

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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- * 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

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Note: WinField Solutions (Land O'Lakes) provides sponsorship for the distribution of *Friday Notes* to the National Association of Agricultural Educators.

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