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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.

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Tiptoe through the Tulips



Tulip time in Holland is famous for beauty (and tourism). Speaking of tulips, you can now "[Talk to a Tulip Translator](#)." A respected university in Europe offers this April 1st video that includes aspects of artificial intelligence, geeky humor, and viewer gullibility.

Hearts of Glass

The National Agribility Project located at Purdue University shared this [inspiring trailer for Hearts of Glass](#), a new documentary about [nourishing communities through agriculture](#). It highlights a hydroponic farm in Wyoming where [cutting-edge vertical agriculture meets meaningful employment for community members with disabilities](#).

Ag Research

April 5, 2019

Cutting Food Waste

Government agencies, private organizations, and science-based research attacking the problem.

The USDA, the FDA, and the EPA kick off "[Winning on Reducing Food Waste Month](#)" by calling for greater collaboration with public, private, and nonprofit partners--as well as state and local officials--to educate and engage consumers and stakeholders throughout the supply chain on the need to reduce food loss and waste.



The site offers various links and suggestions--the scope of the problem is wide and complicated, and the remedies are varied. For example, an article this week [looks at portion size](#) and the "culture of excess." Science-based research is also important as the world faces a massive waste challenge. CAST Issue Paper 62 looks at [Food Loss and Waste](#)--possible strategies to combat hunger and sustainably feed the world. And an earlier report from the University of Pennsylvania and CAST--[Food Waste Across the Supply Chain: A U.S. Perspective on a Global Problem](#)--is a compilation and enrichment of papers focusing on the topic.

News and Views

Widespread Effects: The severe Missouri River flooding is damaging the [U.S. farm economy and the global food supply chain](#).



Border Negotiations: President Trump backed away from his threat to shut down the southern border with Mexico but then [pledged to hit the country with automobile tariffs](#). This could affect the renegotiated North American trade pact at a time when the administration is trying to build congressional [support for the U.S.-Mexico-Canada Agreement](#).

National Bio and Agro-defense Facility: The federal government is building a facility in Kansas to [defend against bioterrorism and stop](#)

University of Nebraska-Lincoln researchers achieved a record \$308 million in [total research expenditures](#) for 2018--reflecting advancements in agriculture, education, materials research, and virology.



Predicting Eruptions

Cornell scientists merged satellite data on volcanoes with ground-based detail to form a model for state-of-the-art [volcanic eruption prediction](#).

Animal Ag Alliance

The Animal Agriculture Alliance [Stakeholders Summit](#) will occur May 8-9 in Kansas City.

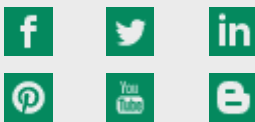
Prestigious UN Meeting Coming to Kansas

Kansas State University will host the [Global Agenda for Sustainable Livestock Multi-Stakeholder Partnership Meeting](#) in September.

Send in Ideas

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

CAST Social Media



[diseases](#) that could devastate the country's farm economy and threaten human lives--but it is behind schedule and over budget.

Energy and Emissions: A new study released by the USDA finds greenhouse gas [emissions from corn-based ethanol are approximately 39% lower](#) than gasoline emissions.

Agriculture Uncertainties: This rural economic [review forecasts problems for U.S. agriculture](#) due to slowing economic growth rates, trade talk frictions, and weather predictions.

More Than Food Alone: Jayson Lusk (Purdue) says that agriculture is set up to grow food--and [to produce energy and nutrients](#).

News from the Far Side of the Barn

One Way to Tour Rio!

(video): This police officer flies on the wild side as he [uses a wingsuit to zoom over the impressive sights](#) of Rio de Janeiro.

Where Was Dumbo When We

Needed Him? (video): Six [baby elephants were rescued](#) from a muddy pit in Thailand after being stuck for two days.

Eating the Inedibles

(video): Goats are ill-tempered and incessantly hungry--but [they can also help prevent deadly wildfires](#).



As we reported in January, Romeo--a rare water frog--was matched up with his Juliet. Scientists are still hoping the two are amorous enough to help [stave off the extinction of the species](#).

CAST in the Nation's Capital

Presentations, an award, a publication rollout, and more

The famous cherry blossoms will have come and gone, but CAST will be blooming on several fronts in Washington, D.C., during mid-April. A new publication will roll out during three events on the 15th; the Borlaug CAST Communication Award will be in the spotlight on the 16th; and the CAST Spring Board of Directors Meeting will involve gatherings and discussions April 17-18.

Publication Rollout--Water Quality Issues

Dr. Heidi Peterson will present highlights of CAST's new issue paper, *Reducing the Impacts of Agricultural Nutrients on Water Quality across a Changing Landscape*, on April 15 at three venues (the Longworth House Office Building, the Russell Senate Office Building, and the Fertilizer Institute). Dr. Peterson will present an overview of the processes, conservation practices, and programs that influence the impact of agriculture on surface and groundwater quality. Peterson currently serves as the Phosphorus Program Director for the International Plant Nutrition Institute, and she is recognized for her expertise in the implementation of management practices to address impaired waters issues from agricultural nutrients. [Check here for details about attending](#). Download this CAST publication starting April 15 at cast-science.org/publications.



Borlaug CAST Communication Award--Presentation and Announcement

The Promise of Prosperity from the Land in the 21st Century



Marty Matlock, PhD, PE, BCEE
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You are [invited to join CAST for a presentation by Dr. Marty Matlock](#) on *The Promise of Prosperity from the Land in the 21st Century*--April 16 in Washington, D.C. Dr. Matlock, winner of the [2018 Borlaug CAST Communication Award](#), is an internationally recognized expert in agricultural sustainability metrics and assessment. Matlock has become the world's leader in the science of agricultural sustainability during the past 10 years through his global communication effort.

Following the presentation, CAST President Gabe Middleton will announce the 2019 Borlaug CAST Communication Award winner.

Spring Board of Directors Meeting

On April 17 and 18, members of the CAST Board of Directors will join EVP Kent Schescke for discussions about the organization's goals and meetings with various members and stakeholders.

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 tulip pic from huffingtonpost.com, volcano pic from plugin.us.jpg, flood pic from reuters.com, and frog pic from bbc.co.uk. Animal Sec. cattle pic from tawnytetroult.facebook and rodeo pic from gawkermedia.com. Food Sec. mouse pic from topsimages.com. Inter. Sec. restaurant pic from telegraph.co.uk. Bug pic from sciencemag.org. Gen. Sec. group photo from unr.edu and Mars cartoon from secondcloudontheleft.blog. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Concerns about Horse Safety (video): A two-horse collision at Santa Anita [led to the 23rd equine fatality](#) at the Southern California track since December.

Sustainable Beef: According to this expert, [beef cattle play a key role in a sustainable food system](#) by "upcycling"--they consume plants and by-product feeds of lower value and upgrade them to high-quality protein.

Dual-purpose Chickens? Research in Germany looked at a line of chickens that could promote egg and poultry meat production--[eggs from the female and meat from the male](#).

Solutions? (editorial related to above): This editorial looks at the overall situation regarding the [culling of male chicks](#).

Future of Pig Farming: The National Pork Board named Bailee Arnold from North Carolina, Ben Luebbering from Missouri, and Ben Wikner from Iowa as the [2019 Pig Farmers of Tomorrow](#).

Sweet Dreams for Dairy Cows? This University of Missouri report looks at the [use of dairy cow waterbeds](#).

Happy Cows, Happy Milking? Waterbeds have been in the barn for several years as this archived blog points out--[Cows, Waterbeds, and Bovine Sleeping Habits](#).



Climbing On and Risking Death: Women's bronc riding is not sanctioned by any of the largest rodeo organizations--but [some daring competitors still take the risk](#).

A Milky Controversy (opinion): The National Milk Producers Federation vows to "fight against [fake milk and milk products](#)."



Three calves saved themselves from floodwater, and a farmer brought them food by boat. Recent catastrophic floods affected large areas of Midwest farm country. This article lists government and university [agencies that can assist in the recovery](#).

Food Science and Safety News

Demand for Better Nutrition in Schools: Six states and the District of Columbia recently [sued the USDA](#) because of the "weakened nutritional standards in school breakfasts and lunches." This [video shows the original statement](#) from USDA Secretary Perdue explaining why the changes were made.

Possible Burger? Burger King is introducing a version of its iconic [Whopper sandwich filled with a vegetarian patty](#) from the start-up Impossible Foods. Criticism is coming from diverse groups such as cattle ranchers and PETA.

Name Game (related to above): As this article explains, officials on both sides of the Atlantic are [struggling with how to label](#) veggie "burgers."

Omega-3 Breath of Fresh Air? This new study says that a higher consumption of omega-3 fatty acids--found in oily fish and certain plants--is linked to [reduced asthma symptoms](#) for some kids.



The USDA ruled that [GMOs in U.S. products must be disclosed](#)--and the agency wants a mandatory, uniform standard. An expert looks at the effects of the law.

Omega-3 Information (related to above): Chaired by Iowa State professor Don Beitz, this CAST report helps readers make informed decisions about nutrients and food choices--[Omega-3 Fatty Acids: Health Benefits and Dietary Recommendations](#).



Get Moving: This university study says that [physical activity does more](#) to maintain substantial weight loss than diet.

FoodData Central: The USDA's Agricultural Research Service released an [integrated food and nutrient data system](#) that provides online access to nutrient profile information about a wide variety of foods and food products.

Plant Agriculture and Environmental News

Plant Breeding Benefits (video): This plant expert explains why it is [important to understand plant breeding](#)--and he uses hot peppers as an example.

Innovation and Plant Breeding (related to above): Check out CAST IP 57, [Plant Breeding and Genetics](#).

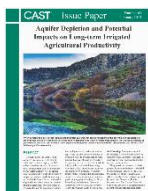
Weeds and All: This woman received her [degree in plant and soil science](#) from Tuskegee University, and a recent profile looks at why--for her--plants are cool, and weeds are too.

Fighting an Invasion (opinion): This wildlife expert says that nonchemical alternatives are the best way to handle invasive plants, but he also says [herbicides can sometimes be the best method](#) to control certain problems--and therefore help fish and wildlife.



I Robot Update: Roboticists are getting better at creating crop-specific [machines to harvest fruits and veggies](#)--from a robot that gathers lettuce with a "knife made out of water" to an apple-picking machine that determines ripeness.

Pesticides and Autism? The [purpose of this British medical journal study was to examine possible associations](#) between early developmental exposure to ambient pesticides and autism spectrum disorder.



That Sinking Feeling: According to this extensive report, Louisiana loses a football field's worth of land every hour and a half. Engineers are in [a race to prevent it from sinking](#).

Water Issues: Check out CAST IP 63, [Aquifer Depletion and Potential Impacts on Long-term Irrigated Agricultural Productivity](#).

International News

Have Disease, Will Travel (video): The highly contagious African swine fever virus has been detected [for the first time in Japan](#).

Amphibians under Pressure (video): Some [amphibians might face mass extinction](#) as the chytrid fungus spreads across the world.

Drones on the Farm: This Chinese dronemaker employs 1,400 people, and the [company aims to bring technology](#) to farmers--especially aging and rural agriculture workers.

Ag in the Czech Republic: Close collaboration between scientists, researchers, and farmers has

helped [agriculture in the Czech Republic take significant digital steps](#) and increase competitiveness, according to these analysts.



Going Buggy in Brazil: Researchers in Brazil are developing the usage of [insects as a suitable ingredient for animal diets](#). Tests show that crickets, black soldier flies, and mealworms show promise.

Olive Oil Trends: Olive oil production in Spain and Portugal is on the rise, but [Italy and Greece are struggling](#). Several reasons--including climate change--are possible factors.



Five meters below the surface of the North Sea, near the southernmost tip of Norway, Europe's [first underwater restaurant is now complete](#).

General Interest News

A Glacial Surf (video): Tourists visiting the Breidamerkurjökull glacier in Iceland narrowly escaped a [large wave that crashed toward the shore](#) after part of a glacier collapsed.

Measles Hospital Alert (video): UC-Davis officials told 200 people that they [may have been exposed to measles](#) after a 7-year-old with the disease came to the hospital's emergency room last month (related stories below).

Measles Outbreak: The [number of people sickened by measles](#) in the first three months of this year is more than for all of 2018--and the second-highest number reported since the year 2000 (related story below).

Vaccinating against Misinformation

(opinion): According to this editorial, the combined efforts of social media platforms, health organizations, public policy campaigns, and grassroots advocacy may [eventually overcome anti-vax junk science](#).

Drone Storm: The most ambitious [drone-based investigation of severe storms](#) ever to be conducted will be launched soon by the University of Nebraska-Lincoln and three partner institutions.



The University of Nevada-Reno provides this look at three researchers--and a link to a ["women and science"](#) video.



Martian Gas Pain: Something on [Mars is emitting methane](#)--but scientists can't say yet whether the source is geological or biological.

'Perdue@Purdue' (video): While the U.S. Secretary of Agriculture Sonny Perdue visited Purdue University, [a reporter asked](#) him what will bring back young farmers to the agriculture industry.

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.



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- * Bayer
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- * National Milk Producers Federation
- * National Pork Board
- * North Carolina Biotechnology Center
- * North Central Weed Science Society
- * Northeastern Weed Science Society
- * Poultry Science Association
- * Rural Sociological Society
- * Society for In Vitro Biology
- * Soil Science Society of America
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- * The Fertilizer Institute
- * Tuskegee University
- * Tyson Foods
- * United Soybean Board

- * University of Nevada-Reno
- * Weed Science Society of America
- * Western Society of Weed Science

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