

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 CAST.

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[Upcoming CAST Publication Release and Webinar--P. 2](#)

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[Food Science and Safety News](#)

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View from Space



In case you missed the Neowise comet, this video from the [International Space Station gives you a viewpoint](#) from on high.

Events and Announcements

See page two below for more [information about the upcoming CAST publication release](#) (July 27) and webinar (July 28) regarding hormones in food animals.



The Farm Progress Show and Husker Harvest Days will morph into the [Farm Progress Virtual Experience](#), Sept. 15 to 17. Check [here for more details](#).

The University of Arkansas will receive a \$130,000 grant in support of the [Arkansas Discovery Farms Program](#)--a project designed to improve soil and water health.

The [Poultry Science Association](#) successfully completed its first virtual meeting--it included a selection of new board members.

July 24, 2020

Cure for the Summertime Blues?

Agricultural sectors are caught up in the challenges facing the United States--and much of the world--as coronavirus continues to influence diverse health, economic, and social factors. Science might provide a cure; the National Institutes of Health is launching an unprecedented effort--called [operation warp speed](#)--to find a cure, [several vaccines are showing promise](#), and the U.S. government [purchased 100 million doses](#) of a potential vaccine for free distribution--if it works. But for now, everything from the food chain to agricultural gatherings are coping with the harsh realities of the pandemic. As reported last week, education systems are working to develop strategies for the fall. Check examples of such proposals from the [University of Nebraska](#), the [University of Nevada-Reno](#), and [North Carolina State University](#).



A recent [CAST publication addressed many of the issues](#) facing agriculture during the COVID-19 era. As stories featured throughout this newsletter demonstrate, health workers, organizations, community groups, companies, educators, and others are working hard to help the country get through the challenges. It's summertime, and the "livin' is supposed to be easy," but this year, the focus is on how to turn the summertime blues into an eventual return to "normal."

News and Views

USDA Updates: The USDA announced [new funding to help](#) socially disadvantaged and veteran farmers and ranchers own and operate successful farms, and the department released its [Boxed Beef and Fed Cattle Price Spread Investigation Report](#). Note: This link features the [reactions from cattle organizations](#) to the USDA investigation.

Current Ag Issues: In this *Agri-Pulse* Open Mic Interview, Dr. Barbara Glenn--CEO of the [National Association of State Departments of Agriculture](#)--discusses issues related to the pandemic, broadband coverage, markets, worker protection, and more.



COVID-19 Red Zone (Update): A [third of all U.S. rural counties](#) are in a "red zone" for COVID-19 cases.

"Called to Act and Speak the Truth": Tuskegee University President Dr. Lily D. McNair honors the amazing [life of Congressman John Lewis](#).

News from the Far Side of the Barn

Fearless in the Fjord (video): A Norwegian skydiver free-fell from a

[Farm Journal Field Days](#) will include live events August 25-27 as farmers, ranchers, growers, and specialists join in virtual settings.

[North Carolina A&T State University](#) received a National Science Foundation award, and the [University of Florida](#) announced a research partnership with NVIDIA.

Iowa State University scientists received a grant to research methods to find overlooked targets for [drug therapies in ribonucleic acid](#).

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

CAST Social Media



helicopter onto a mountain and then [base-jumped using a wingsuit](#) down the 4,567 foot slope.

Social Distancing Not in This Bear's Plan (video): A hiker [stayed calm and took a selfie](#) as a bear pawed at her and sniffed her hair.

Duck Tales Go Viral (video): This website features the [Gold Shaw Farm's duck antics](#).



No longer wingin' it. If birds had arms.

CAST Updates about Publications and Webinars

New CAST Commentary

On Monday, July 27, the new CAST commentary, *Impacts on Human Health and Safety of Naturally Occurring and Supplemental Hormones in Food Animals*, will be released. A webinar session featuring Robert Collier (University of Idaho and publication task force chair) and the other task force authors will occur on July 28. Register for the [free webinar here](#).

Impacts on Human Health and Safety of Naturally Occurring and Supplemental Hormones in Food Animals
CAST Commentary QTA2020-4

Robert Collier
University of Idaho

Laura Hernandez
University of Wisconsin-Madison

Jimena Laporta
University of Florida

Jim Lauderdale
Upjohn/Pfizer/Pharmacia

Zachary Smith
South Dakota State University

Student Study Guides

CAST study guides are available on the paper's landing page on CAST's website [under the "Publications" tab](#). As Dr. Anna Dilger (University of Illinois and CAST incoming President-Elect) said, "Through the study guides, we highlight the main topics of newly released CAST papers and then provide questions that ask students to think more deeply about the issues. We hope that teachers and students alike find them useful and that this tool attracts even more people to engage with CAST."

Upcoming Publications

- *Agriculture and the Microbiome* (August 25 release)
- *The Importance of Communicating Empirically Based Science for Society* (mid-September release)

- *Food Biofortification--Reaping the Benefits of Science to Overcome Hidden Hunger*(mid-October release)
- *Ground and Aerial Robots for Agricultural Production: Opportunities and Challenges*(mid-November release)

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 space photo from scitechdaily.com, earth and barn pic from shipinsight.com, and bird pic from indianexpress.com. Animal Sec. Grandin photo from coloradostate.edu. Food Sec. graphic from fda.org. Inter. Sec. pig pic from pbs.com. Gen. Sec. virus art from sciencemag.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service or CAST.



Animal Agriculture and Environmental News

Whopper of an Ad Leads to Meaningful Dialogue (video):

As reported last week, Burger King [created a buzz with a commercial about burgers](#), cows, and methane. After hearing from Dr. Frank Mitloehner (UC-Davis) about inaccuracies in the ad, the [company halted broadcasts and asked Mitloehner to work with them](#) to get things right.



Check out Temple Grandin's editorial about [protecting the meat supply chain](#).

Animal Welfare (opinion): Check out the [guest blog from Dr. Candace Croney](#) titled *The Paradox of Addressing Animal Welfare while Dehumanizing People*. Croney (Purdue) was a co-chair on the CAST paper [Scientific, Ethical, and Economic Aspects of Farm Animal Welfare](#).

Fishy--In a Good Way: As [aquaculture and fisheries](#) play an increasingly important role in addressing global food security, Mississippi State University is continuing to build its reputation as an international leader in the field.

Fitbits for Chickens: Motion sensors were placed into mini[backpacks on chickens](#) to determine if they were affected by parasite infestations.

Pork Exports: Despite political wrangling, the United States appears to be benefiting from the phase one trade deal with China [in terms of pork exports](#)

Research about Blue-green Algae and ASF: A Kansas State University expert warns ranchers that toxic blooms in stagnant water [can threaten livestock health](#), and KSU scientists have partnered with a company to work on a [vaccine for African swine fever](#).

Funds during the Crisis: Iowa producers who euthanized hens as a result of plummeting demand for eggs caused by coronavirus shutdowns will be eligible for [government payments to cover disposal costs](#)

Dealing with Methane: These experts say it is now possible for tech firms and farmers to [lower the amount of livestock-based methane](#) being released into the atmosphere.

Food Science and Safety News

Food and Robotics (video): Tech and robotics are part of the food industry's push for [safety and sanitation during the coronavirus pandemic](#). The robots include Sally, the 30,000 dollar salad machine.

Addressing Global Food Production: The Food Systems Institute at the University of Florida will bring researchers together to find solutions to [feed the world](#).

Beating Cross-contamination: Texas A&M researchers created a [coating that battles cross-contamination of produce](#), and University of Missouri scientists made a [coating capable of eliminating foodborne germs](#), including in meat processing plants.

Cutting Sugar: The proposed dietary recommendations from the USDA

[include less added sugars](#)

Beef Pledge: Beef industry members follow a [statement of principles](#) that includes committing to wholesome, nutritious beef that plays a role in a healthful diet.

No Need to Spit Away Your Watermelon Seeds: According to this site, left-over pickle juice, watermelon seeds, orange peels, and more should not be thrown--[they can add flair to your meals](#)

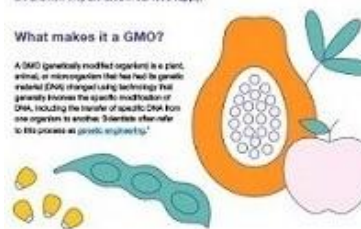
Veggie Sales: Retail [sales of fresh vegetables](#) continue to significantly exceed 2019, as many consumers continue to eat more meals at home during the COVID-19 pandemic.

GMOs 101: YOUR BASIC QUESTIONS ANSWERED

GMO foods have been available to consumers since the early 1990s. Since then, the U.S. Food and Drug Administration (FDA), U.S. Environmental Protection Agency (EPA), and U.S. Department of Agriculture (USDA) have worked together to ensure that crops produced through genetic engineering are safe for people, animals, and the environment. Despite there being a wide range of foods--GMO and non-GMO--available to consumers, there is some confusion about what GMOs are and how they are used in our food supply.

What makes it a GMO?

A GMO (genetically modified organism) is a plant, animal, or microorganism that has had its genetic material (DNA) changed using technology that generally involves the specific modification of DNA, including the transfer of genetic DNA from one organism to another. Scientists often refer to this process as genetic engineering.



Feed Your Mind is an FDA education initiative to help consumers [better understand genetically engineered foods](#).

Plant Agriculture and Environmental News

Cacti and Solar Development (video): UC-Davis experts say putting large [solar energy facilities](#) in deserts could be a threat to cacti and other plants.

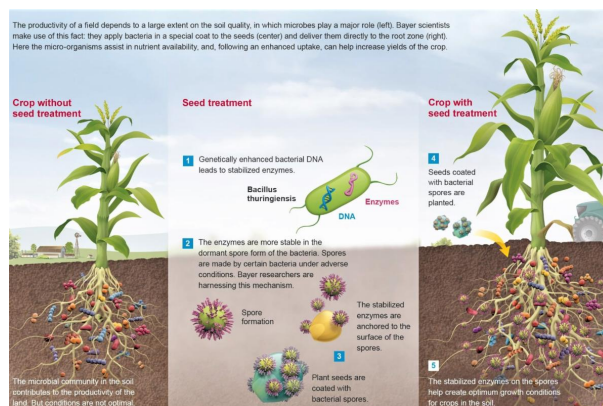
Puerto Rican Soil: This article discusses the [different soils](#) found in Puerto Rico and what crops grow best in them.

Isoflavones in Soybeans: [Feeding isoflavones](#) to pigs may protect them against viral pathogens, according to a University of Illinois study.

Biotech and Mycotoxins: This infographic explains that [biotech corn can greatly decrease levels of mycotoxins](#) in crops.

Controlling Invasive Weeds: [Rejuvra](#)--a herbicide that controls weed species on rangeland, CRP land, and natural areas--has been approved by the EPA.

Plant Diseases in the Wind: Cornell scientists have been selected for a NASA grant to study how plant pathogens [travel the globe](#) and potentially put crops at risk.



According to this report, [custom-made microbes are coming](#) to reduce farm pollution and make crops more productive. Note: watch for CAST's new publication, *Agriculture and the Microbiome*, in August.

International News

Study Abroad: For 14 straight years, Robert Sites has led University of Missouri students to Thailand for an [educational study abroad experience](#) focused on biodiversity and conservation.

Got Milk--Globally: Increased [demand for milk products](#) in China and other parts of Asia has sparked a rebound in global dairy prices--improving the profit outlook for many farmers.

Vitamin Bullets: Cambridge scientists developed a way to [fortify shellfish to tackle human nutrient deficiencies](#) that cause severe health problems across the world.

Say Cheese: Cheesemakers from England and Bavaria have [collaborated to produce a hybrid cheese](#) called AlpenCheddar.

Migrant Workers in Need: This opinion piece says [migrant farm workers in Canada](#) are short of food and protective equipment.



The United Kingdom supports a campaign to [combat the introduction and spread of the pig disease African Swine Fever](#)

Ag Revolution in India? Some are convinced that a historic [change is underway](#) that could dramatically increase India's rice output and its global markets.

swine fever.

General Interest News

Saddle Up (video): As this *60 Minutes* segment explains, the [Wright family dominates saddle bronc riding](#). Excellent rodeo events occur at universities also. Cal Poly had to postpone recent rodeo events because of the pandemic, but its [successes during the past year were noteworthy](#).

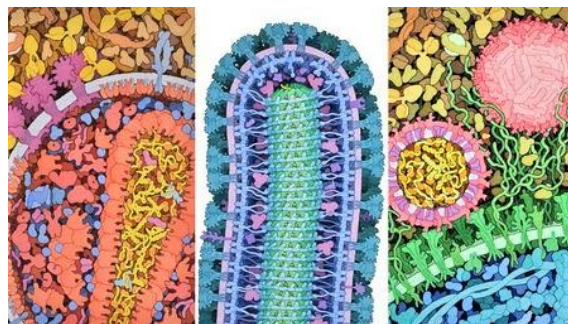
Carbon Labels: Food packaging started displaying nutritional contents 25 years ago; now some producers are featuring "[carbon labels](#)" to address climate change concerns.

Digital Ag Research: Cornell researchers are exploring how [digital agriculture could affect](#) small and mid-sized farms--and the environment.

Celebrating Agriculture: Abbey Werstler, an Ohio State University student, is using her position as [2020 National Ms. Agriculture](#) to promote agriculture.

Fighting COVID-19 with Better Nutrition: Self-Help International and other organizations are working to [combat disease and malnutrition](#), scourges that have intensified during the pandemic.

Big Animals and Biology: The [world's largest](#) sharks, crocodiles, and spiders can tell scientists a lot about an animal's biology.



This scientist painter turns [deadly viruses into beautiful works of art](#).

Societies, Companies, and Nonprofit Organizations Serving on the CAST Board of Representatives

- * Agricultural & Applied Economics Association
- * American Association of Avian Pathologists
- * 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
 - * Cal Poly State University
 - * Corteva Agriscience
 - * CropLife America
 - * Crop Science Society of America

 - * Entomological Society of America
 - * Innovation Center for U.S. Dairy
- * Bayer
 - * National Cattlemen's Beef Association, a Contractor to the Beef Checkoff
 - * 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
 - * Rural Sociological Society
 - * Society for In Vitro Biology

- * Soil Science Society of America
- * Syngenta Crop Protection
- * The Fertilizer Institute
- * Tuskegee University
- * United Soybean Board
- * University of Nevada-Reno
- * U.S. Poultry and Egg Association
- * Weed Science Society of America
- * Western Society of Weed Science

CAST, through its network of experts, assembles, interprets, and communicates credible, balanced, science-based information to policymakers, the media, the private sector, and the public.

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- * Mississippi State University
- * North Carolina Agricultural and Technical State University
- * North Carolina State University
- * Penn State University
- * Texas A&M University College of Ag & Life Sciences
- * The Ohio State University
- * Tuskegee University
- * University of Arkansas System Division of Agriculture
- * University of California-Davis
- * University of Florida Institute of Food and Agricultural Sciences
- * University of Kentucky
- * University of Missouri-Columbia
- * University of Nebraska Agricultural Research Division
- * University of Nevada-Reno College of Agriculture, Biotechnology and Natural Resources



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