

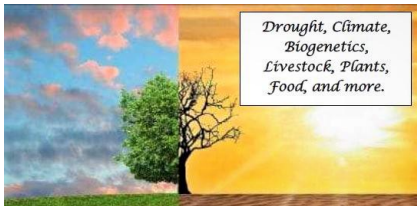


Friday Notes is designed to enhance communication among various agricultural sectors, educators, students, and the public who are interested in a variety of plant, animal, food, and environmental issues. Friday Notes advocates the pursuit of credible, unbiased, science-based information. Material contained in linked articles is from the original authors and does not necessarily reflect the views of CAST.

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Announcements



CAST will roll out its new Commentary—*The Role of Agricultural Science and Technology in Climate 21 Project Implementation*—June 28 with a [webinar presentation June 29](#). See page two below for more.

In preparation for the UN Food Systems Summit, the [Global Agricultural Productivity Initiative](#) makes the case for productivity growth as a key strategy.

Check here for news and information from the [Cornell Alliance for Science](#) and its director, Sarah Evanega—[2021 BCCA](#) winner.

The July 12 [Agri-Pulse Food and Ag Policy Summit](#) in Sacramento will focus on the topic “How Can California Agriculture Remain Competitive?”

CAST College Corner

[University of Florida](#) researchers joined an ambitious global effort to better track the coronavirus and stop any nascent pandemic in the

June 18, 2021

Broadband Key to Rural Growth and Sustainability

According to a recent report, 42 million Americans—a majority of them in rural areas—do not have proper access to wireless broadband. But [studies indicate better internet speeds could decrease costs and increase profits](#) for food producers of all types. The U.S. government laid out "[A Case for Rural Broadband](#)" several years ago, and it now calls it a "[modern-day necessity](#)." Food producers agree that the lack of reliable broadband prevents more farms from adopting technologies that [promote precision agriculture and environmental sustainability](#). As this expert points out, many are [hopeful subsidies and incentives will help](#) companies install the infrastructure needed to provide high-speed internet to all Americans—including those who grow our food.



News and Views

USDA News: The department announced (1) a program to [help rural communities create good-paying jobs](#) and business opportunities, (2) additional aid to agricultural producers and businesses as part of the [USDA Pandemic Assistance for Producers](#) initiative, and (3) aid to biofuels producers, timber harvesters, and dairy farmers as part of a package to [assist industries recovering](#) from the pandemic.

Science-based R&D: The USDA highlighted the [importance of agricultural research and development](#) and the need for G20 agricultural science leaders to actively advocate for science-based decision making.

Heat and Drought: A heat wave brings [record temperatures to 40 million people](#) in the western United States, and as the U.S. Drought Monitor shows, [dry conditions are affecting many crop-producing regions](#), including [the corn belt](#).

Debt Relief Program: A federal judge [paused the USDA's debt relief program](#) for farmers of color. [A group of 23 organizations](#) are challenging the ruling.

New Vax and Tracking Map: The biotechnology company

future.

A [University of Nevada-Reno](#) doctoral student runs a project using cutting-edge technology to see how sheep and cattle grazing might help control cheatgrass, a major contributor to wildfires.

[University of Arkansas](#) researchers received a grant from NASA to study how carbon dioxide ice pits in the polar caps of Mars formed and evolved.

Check throughout *Friday Notes* to see more featured articles from member universities.

CAST Social Media

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

Novavax announced that its [coronavirus vaccine candidate](#) has an overall efficacy of 90.4% in a Phase 3 trial. Check here for an updated state-by-state [coronavirus tracking map](#).

Far Side of the Barn

More Than Just a Ball of Fluff (video): Out of 2,500 dogs, Wasabi—a Pekingese—took home the [Best In Show](#) crown at the 2021 Westminster Kennel Club Dog show.



Cynic Has Doggy Soft Spot (video): As this writer said, "I went to the Westminster Dog Show and all I got was this [lousy, positive view of humanity](#)."

CRISPR—The Musical (video): Scientist Allison Songstad turns the history of [CRISPR into a Hamilton-flavored parody](#).

CAST Updates

Dr. Sally Flis Voted CAST President-Elect for 2021-2022



Congratulations to Dr. Sally Flis—Sustainable Ag Field Manager with Nutrien Ag Solutions—who was chosen as the [President-Elect for 2021-2022](#). Flis is a member of and has chaired the Plant Ag and Environment workgroup (PWG) at CAST. She has also served on the Board of Directors since 2018 as the PWG Liaison, has led the efforts for three CAST publications, and is a contributing author for the USDA Climate 21 Response paper.

One of her visions for the future of CAST is to explore on-campus activities with CAST education members in an effort to help grow the next generation of members and authors. In 2022-2023, she will become the 50th president of CAST. Congratulations Dr. Flis!

CAST presents a free webinar on *The Role of Agricultural Science and Technology in Climate 21 Project Implementation*

This report will summarize the key recommendations and priorities where current agricultural science and technology for plant and animal production can be applied and where new investments will be critical to meeting the goals of the administration.

This webinar is part of a series on climate change cohosted by the National Coalition for Food and Agricultural Research (NC-FAR).

It will take place on Tuesday, June 29, Noon Central; you can [register for the free webinar here](#). A free download of this CAST Commentary will be available June 28 from the CAST website.



Animal Agriculture and Environmental News

Keeping Pigs Safe (video): [Biosecurity was a major topic](#) at the recent World Pork Expo.

Packers and Stockyards Act: The USDA announced it will begin work on three proposed rules to support enforcement of the [Packers and Stockyards Act](#)

The Cage-free Transition: This [site looks at the cage-free transition](#), egg price volatility, and feed costs.

Cow Power (video): Cattle [farmers convert manure into electricity](#) as they keep the seven villages of Iowa's Amana Colonies (a National Historic Landmark) powered.

Poultry Science Awards: The Poultry Science Association announced this year's award recipients of the [organization's awards and fellowships](#), recognizing professional contributions to the field of poultry science.

Making a Comeback: Gray wolf pups have been spotted in Colorado for the [first time in 80 years](#)

Fish Hotels: Mississippi State University researchers are creating housing for fish—especially “frecklebelly madtom catfish.” This helps them [study and protect the species](#).

Invasive Carp: University of Missouri researchers are studying how the dynamics of river water flows influences the [spread of the invasive carp](#).



A family hog farm in Missouri connected with a Georgia teen who used their [show pig stock to help with the obstacles](#) that arose during the pandemic, especially with her father's fight against cancer.

Researchers are studying ways to [prevent the spread of African swine fever](#), and composting might be one of them.

Food Science and Safety News

Julia's Kitchen (podcast): The Julia Child Foundation for Gastronomy and the Culinary Arts features [specialists at cooking, culinary history, and food writing](#).

Seaweed for Health? Researchers are looking at a type of algae—red seaweeds—that [could have anti-cancer effects](#).

Gut Reactions: These researchers looked further into the [human gut microbiome as a complex community](#) of trillions of microbes that are constantly interacting with each other and our bodies.

Another Type of Microbiome (see above): The CAST publication [Agriculture and the Microbiome](#) looks at the use of crop microbiomes to improve plant production.

Pass the Almonds: After analyzing more than 1,000 raw foods, these researchers ranked the ingredients that they think provide the [best balance of nutritional requirements](#).

What Makes It Pop? An article published in the *Agronomy Journal* tries to determine the [properties affecting popping qualities of popcorn](#).



The global pandemic forced the food industry to adapt, and in this article, four experts outline [15 top trends in the grocery industry](#).

Plant Agriculture and Environmental News

Oil and Gas Leases in Court: The Administration's suspension of new oil and gas leases on federal land and water was [blocked by a federal judge](#).

Self Destruction for Dreaded Weed? Some think Palmer amaranth can be [negated by using its own pollen](#) that has been treated with radiation to ensure sterility.

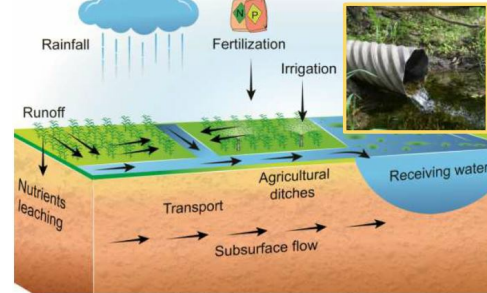
Genomics and Plants: An Iowa State University study used advanced data analytics to help scientists understand [how the environment interacts with genomics](#) in corn, wheat, and oats.

A Real Can of Worms (video): Crazy worms—also known as jumper worms—reproduce rapidly and [can be damaging in forests](#), especially for sugar maple trees.

Worms Can Be Helpful: A Phoenix operation [uses worms to turn food scraps into compost](#) that goes back into the ground and helps plants grow.

Bioreactor Study: Bioreactors are underground trenches filled with woodchips that [remove nitrogen from the water](#).

Apple Production: These researchers look at how climate change might be [threatening apple production](#), with a focus on a bacterial pathogen that has been spreading.



Several Midwestern states have earmarked funding for [programs to reduce nutrient runoff](#) from farmland into waterways.

A Kansas State University crop nutrient specialist talks about the process of [nutrient release from crop residue](#) and cover crops.

Check out the [CAST Issue Paper Reducing the Impacts of Agricultural Nutrients on Water Quality across a Changing Landscape](#).

International News

Mechanized Farming: Wageningen University specialists joined with an experiment in Nigeria that showed [how positive mechanization can be](#) for smallholder rice farmers.

Pig Research: Large pig farms affect the economy and culture of Okinawa, and now [researchers are working to treat the wastewater byproducts](#) from these farms.

Beans, Olé, Olé, Olé: Many Brazilians believe [a meal without beans is incomplete](#), and the food has even been a source of songs and poems.

Milk Prices: In parts of Canada, they might just cry over spilled milk [considering the high prices](#).

Otters Go Fishing (video): Otters have been [helping these Bay of Bengal fishermen](#) since the 6th century.

Toxic Ship Disaster (essay and photos): A [fire aboard a container ship](#) has caused one of the worst environmental disasters ever off the coast of Sri Lanka.



An [ecosanctuary in New Zealand's capital city](#) of Wellington features more than 40 native bird species, several endangered animals, and hundreds of native plants.

General Interest News

Vanilla Plastic: Researchers found a way to [attack plastic pollution and create vanilla flavoring](#) in the process by using genetically engineered bacteria.

Zapping Weeds: A newly designed agricultural robot can kill individual [weeds with electricity](#).

Energy Value (audio interview): A Kansas State University ag economist published findings looking at the impact of income [gained from energy produced on the farm](#).

Cool Cats (and Dogs): North Carolina State College of



30 Under 30--from farmers to

Veterinary Medicine offers some tips for [keeping your pets healthy](#) and happy this summer.

Black Hole Hunting: A Penn State graduate student explained why X-ray surveys are the [best way to find growing supermassive black holes](#) located at the cores of many large galaxies.

veterinarians, 4-H to Extension, these [young people are ready to make a difference](#) in the world of agriculture.

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- * 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 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
- * 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 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

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Dan Gogerty (Communications and *Friday Notes* Editor)
dgogerty@cast-science.org
Dylana Luett (Communications and Social Media Specialist)
dluett@cast-science.org
The Council for Agricultural Science and Technology
4420 West Lincoln Way
Ames, Iowa 50014-3447
Phone: 515-292-2125



The Science Source for Food,
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*** With assistance from Megan Wickham (Scientific Editor) and Colleen Hamilton (Membership Specialist)*

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