



Friday Notes



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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Announcements

The National Institute for Animal Agriculture's [Annual Conference is April 18-20](#).

The California Department of Food and Agriculture and the UC Davis College of Agricultural and Environmental Sciences invite you to participate in a two-day conference: [State of the Science Summit: Feed Strategies to Reduce Enteric Emissions](#). It will be held May 2-3; a live stream will be available.

CAST College Corner

At [Iowa State University](#), approximately 550 people celebrated the inaugural George Washington Carver Day on February 1.

A [North Carolina State University](#) study shows that paper made from banana fibers and cardboard helped yam seeds planted inside the paper by increasing yam size and yields.

CAST Social Media

March 3, 2023

Plant Science in Space

During the week of February 20th, crew members aboard the International Space Station conducted scientific investigations that included evaluating the benefits of [growing plants on the space station](#), demonstrating robotic hopping maneuvers, and testing an instrument to measure air particles.



According to NASA, five major hazards appear during long spaceflights: space radiation, isolation and confinement, distance from Earth, low gravity, and the hostile and closed environment of a spacecraft. [Living plants and freshly grown food](#) could play a major role in supporting three of these: nutrition, medical needs, and crew psychology.

The European Space Agency believes that [hydroponic gardens](#) can be grown on the moon.

News and Views

USDA Updates: The USDA announced 1) nearly \$10 million is being investing in [forest nursery and native seed partnerships](#) and 2) the first steps in its process for providing financial assistance to [borrowers who have faced discrimination](#).

Avian Flu: The USDA APHIS has recently added [10 new cases](#) from four states and five species to their HPAI list. There are [measures that could help keep](#) avian influenza in check from becoming a pandemic. [Bald eagles have been hit hard](#) by the avian flu outbreak.

Far Side of the Barn



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

Unusual Confection: A German ice cream parlor has expanded its menu with a skin-crawling offering: [cricket-flavored scoops](#) with dried brown crickets on top.



CAST Updates

CAST Student Collaboration



From February 25-26, CAST EVP/CEO Kent Schescke participated in an Education and Training Program Development course that is a joint effort of the University of Illinois and the University of Missouri. The students attending are assigned to teams to work with partner organizations like CAST on the development of education and training programs.

The students assisting CAST include Allie Norton, Ricki Spargo, Mary Watt, Colin Wilburn, and Emmett Zumerchik. Their work will be the development of an interactive student module based upon the 2020 CAST Issue Paper "[Ground and Aerial Robots for Agricultural Production: Opportunities and Challenges](#)." When completed, this module will be a career exploration learning opportunity for middle/high school students interested in opportunities involving robotics, artificial intelligence, and engineering in production agriculture. Once the learning module has been reviewed and approved by the publication's task force, CAST will host it on its website and distribute it through online teacher resource sites.

"This activity will not only help expand CAST's reach by repurposing our content for teachers, but will also help students explore career opportunities and expand their knowledge of agriculture," says Schescke.

"We had a lot of fun being able to brainstorm and create this program," says Allie Norton, "and the team and I are very excited to work on it!"

The team is also strongly encouraged to join CAST as a [Student Individual Member](#) at no cost to continue taking advantage of the available agricultural resources.

Animal Agriculture and Environmental News

Progeny Performance: A new program is aimed at [improving sow](#) and progeny performance.

Monensin: University researchers have found that feeding monensin to beef cows [decreases feed intake and increases efficiency](#).

Western U.S.: As western states are [experiencing significant winter weather conditions](#) following extended drought, livestock producers are facing high levels of supplemental feed needed for longer periods to sustain herds.



Tour dates have been set for the spring 2023 virtual farm tours that help students [build trust in dairy producers](#).

Food Science and Safety News

Food Labeling: As the federal government moves to change rules for what foods can sport "healthy" labels, [manufacturers are pushing back](#).

CAST Issue Paper (related to above): Check out the paper, [Process Labeling of Food: Consumer Behavior, the Agricultural Sector, and Policy Recommendations](#), released in 2015.

Superheated Steam: Researchers at Cornell University are [developing a new tool](#) to eliminate deadly pathogens in commercial dry food processing plants—superheated, dry steam.



Certain pesticides might be responsible for the [occasional strawberry](#) to taste bland and watery.

Plant Agriculture and Environmental News

Chestnut Trees: A fungus wiped out 3.5 billion American chestnut trees. Scientists believe [genetically-engineered, blight-resistant](#) trees will help prevent this from happening again.

Lasers: The future of weeding might lay in [lasers, drones, and AI](#).

CAST Issue Paper (related to above): Check out the paper, [Ground and Aerial Robots for Agricultural Production: Opportunities and Challenges](#), released in 2020.



A team of Agricultural Research Service and university scientists are using [bioluminescence to research nematodes](#).

International News

Maize: Female scientists from four different Latin American countries focused on genetic improvement, soil conservation, seed storage, and other factors in the [hub model of maize cultivation](#).

Sheep: Sheep farmers in the UK are being urged to use the monitoring of ewe body condition score as a [practical step to significantly reduce](#) how many doses of wormer are administered this lambing season.

Mad Cow Disease: Two top Brazilian meatpackers said they will be able to continue supplying China with beef [despite the world's largest beef](#) exporting country's self-imposed ban due to a confirmed case of mad cow disease.



Australia is pushing ahead with plans to [phase out the export of live sheep](#) to improve animal welfare.

General Interest

Water Supply: Dr. Cynthia Rosenzweig, [2022 WFP Laureate](#) and [CAST author](#), will work with New York City's Watershed Agricultural Council to [protect the city's water supply](#).

Food Waste: Professors at The Ohio State University are [spinning food processing](#) waste into "gold."

Chocolate: A study from Penn State suggests that eating chocolate--in moderation--[can be good for you.](#)



Plant breeders work tirelessly to produce innovative garden plants with several beneficial adaptations.

Photo Credits

Lead from NASA. Far Side from Marijan Murat. Food from ucdavis.edu. Plant from ARS Electron Microscope Unit. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service, Constant Contact, or CAST.

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- * 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
- * Association of Equipment Manufacturers
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- * Bayer Crop Science
- * Corteva Agriscience
- * CropLife America
- * Crop Science Society of America
- * Global Teach Ag Network
- * Innovation Center for U.S. Dairy
- * Iowa State University
- * Minor Use Foundation, Inc.
- * Mississippi State University
- * 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
- * National Turkey Federation
- * North Central Weed Science Society
- * Northeastern Weed Science Society
- * Nutrien
- * Penn State University
- * Poultry Science Association
- * Rural Sociological Society
- * Society for In Vitro Biology
- * Society for Range Management
- * Soil Science Society of America
- * Syngenta Crop Protection
- * The Fertilizer Institute
- * The Mosaic Company
- * 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
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