



*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 Blast from the Past*  
In August 1993, the CAST Special Publication No. 17, *Pesticides in the Diets of Infants and Children: Scientists' Review*, was submitted to the Congress, USDA, EPA, FDA, AID, OTA, OMB, the news media, and institutional members of CAST.

CAST also moved to its current location in Ames, Iowa on August 16, 1993.

### CAST College Corner

[Mississippi State University](#) Extension Service provides tips on how to prevent baler fires.

[Tuskegee University and Pennsylvania State University](#) are partnering to mitigate climate change.

### CAST Social Media

**September 9, 2022**

## Carbon Dioxide and the Food Supply Chain

Carbon dioxide is widely [used throughout food and beverage industries](#). The gas puts the pop in soft drinks and the fizz in beer, and is turned into dry ice to keep food frozen.



Supplies of carbon dioxide, a byproduct of industrial processes such as ethanol and fertilizer production, have been [tight since early 2020](#). The current shortage is [believed to be because of contaminates](#), derived from additional wells, that are impacting the purity of Co2 as not all suppliers are able to filter out the impurities.

A company is seeking partners to assist with [alternative gas mix research](#) to reduce or replace Co2 in the event of a third shortage.

### News and Views

**USDA Updates:** The USDA 1) will invest \$300 billion in [transitioning organic farms](#) and 2) announced \$400 million in funding available to create [USDA Regional Food Business Centers](#).

**HPAI Update:** The risk of another Highly Pathogenic Avian Influenza (HPAI) outbreak this fall remains elevated. A [flock in California](#) has been impacted and HPAI has been [found at a giant egg-laying operation](#) in Ohio.

### Far Side of the Barn

**Corn Kid:** Tariq "The Corn Kid" went from eating corn, or a "big lump with knobs," as he

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

famously termed the vegetable in a viral video, to [receiving an invitation](#) from the state of South Dakota to tour its very own Corn Palace.

**New World Record:** A Nebraska man paddled 38 miles down the Missouri River in an [846-pound pumpkin](#) he affectionately named the SS Berta.



## CAST Updates

### CAST Internship Opportunity

CAST is hiring a Communication Intern for spring and summer 2023. The Communication Intern works with the Communication and Social Media Specialist to deliver credible, science-based news about agricultural science and technology through CAST communications. This position also works on developing new communication strategies and evaluating existing strategies.

Position is open for an internship or practicum experience and designed to meet academic requirements. Preference will be given to students with an agricultural background, and currently attending a CAST Education Program member institution. Applications should be submitted by November 11, 2022. [More information can be found on the CAST website.](#)

## Animal Agriculture and Environmental News

**Poultry Month:** September is National Poultry Month; this industry [provides over two million jobs in the U.S.](#)

**Molecular Mechanisms:** This infographic from the *Journal of Animal Science* shows the molecular and biochemical regulation of [skeletal muscle metabolism in animals.](#)

**Swine Virus:** For the first time ever, Senecavirus A (SVA) [has been detected in feed ingredients](#) imported from an endemically infected country that are potentially linked to cases of SVA in pigs from a historically negative national herd.



**University of Nebraska-Lincoln faculty, staff, and students are working to [improve the efficiency, resiliency, and profitability of beef production.](#)**

## Food Science and Safety News

**Lab-Grown Seafood:** A startup company uses [algae to create scallops](#) and another seafood company is creating fish sticks from [cells cultured in a lab.](#)

**Fatty Foods:** New research [investigating the source of our appetites](#) has uncovered an entirely new connection between the gut and the brain that drives our desire for fat.



**For certified cereal seed to reach a farmer's field for**

**Global Food Prices:** Global food prices continue to [decrease for the fifth month in a row](#), despite inflation.

cultivation, it [passes through many hands](#)—international and national breeding programs, government regulatory agencies, and many others.

## Plant Agriculture and Environmental News

**Bees and Crop Yields:** A university has conducted the first study showing how many more species of bees are [needed to maintain crop yields](#) when a longer-term time frame is considered.

**Tar Spot:** University of Missouri's Plant Diagnostic Clinic confirmed tar spot in the state; tar spot of corn is an [emerging disease threat](#).

**Threat to Tree Species:** A new study highlights [how invasive pests and diseases are growing](#) in a changing climate, and could kill off more trees than originally thought.



Researchers have made a first-of-its-kind discovery about [how underwater plants get pollinated](#).

## International News

**Bovine Coronavirus (BCoV):** Preliminary results of a field study in European dairy farms found 73% of farms tested positive for BCoV in the [respiratory pathway of dairy cows](#).

**Heat and Food:** Countries growing 70% of the world's food [face extreme heat risk](#) by 2045; extreme heat will also risk the health of agricultural workers.

**Grain from Ukraine:** Ukraine continues to push out grain—the latest numbers show over [one million tones exported](#).



Around 40,000 Pacific Island workers have been approved to [work in Australia to fill labor shortages](#).

## General Interest News

**Behind the Scenes:** Professionals from various sectors of the pet food industry gathered at [Kansas State University's Pet Food Workshop](#) to dive deeper into the formulation and processing of pet foods and treats.

**Net Farm Income:** The USDA is predicting [net farm income to rise](#), the opposite of their February prediction of 4.5% decrease.

**Cyberattacks:** As farm equipment becomes more advanced and connected to the internet, there are concerns they'll become [targets for cyberattacks](#).



The MOXIE experiment has now [produced oxygen on Mars](#). It is the first demonstration of in-situ resource utilization on the Red Planet.

## Photo Credits

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## *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 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
- \* Aquatic Plant Management Society
- \* BASF Corporation
- \* Bayer Crop Science
- \* Corteva Agriscience
- \* CropLife America
- \* Crop Science Society of America
- \* 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
- \* 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
- \* Zoetis

*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.*

## Members of CAST's Education Program

- \* Cornell University
- \* Iowa State University
- \* Kansas State University
- \* Mississippi State University
- \* North Carolina Agricultural and Technical State University
- \* North Carolina State University
- \* Penn State University
- \* Purdue University Libraries and School of Information Studies
- \* Texas A&M University College of Ag & Life Sciences
- \* University of Arkansas System Division of Agriculture
- \* University of California-Davis
- \* University of Florida Institute of Food and Agricultural Sciences
- \* University of Illinois College of Agricultural, Consumer and Environmental Sciences
- \* University of Kentucky
- \* University of Missouri-Columbia
- \* University of Nebraska Agricultural Research Division
- \* University of Nevada-Reno College of Agriculture,

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The Science Source for Food,  
Agricultural, and Environmental Issues

*\*\* With assistance from Colleen Hamilton (Membership Specialist) and Nick Plaugher (Communications Project Coordinator)*

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