



*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.

#### In This Issue....

**Animal Agriculture News**  
**Food Science & Safety News**  
**Plant & Environmental News**  
**International News**  
**General Interest News**

#### Announcements

The 2023 Borlaug CAST Communication Award (BCCA) Announcement will be held on Wednesday, May 10 from 3-5:30 pm EDT in Washington, D.C. [You can RSVP here.](#)

The 5th [Global Dairy Congress Africa](#) will be held June 20-21, 2023 in Nairobi, Kenya.

The National Academy of Sciences convened a webinar, [The New Era of Digital Precision Agriculture](#), to discuss the latest technological advances and related challenges in agriculture to meet the increasing demands of global food supply.

#### CAST College Corner

An [Iowa State University](#) student has received a scholarship from the Poultry Science Association.

An [NC A&T University](#)-led research team was awarded a NASA grant for flood monitoring data science research.

#### CAST Social Media

**April 21, 2023**

### Emerging Ag Technology

The thought of a fully automated tractor used to be something only imagined in a sci-fi movie. However, technology has changed every part of society, including agriculture. [GPS tractors led the way in the last technological revolution within agriculture](#), now automation and precision technology will certainly lead the way in the next generation.

New unmanned drones and [technology that can plant over 6,000 seeds in just three seconds](#) guarantee to change agriculture. These technological advancements don't offer any silver bullets, but they do have the potential to [decrease labor inputs, and lower environmental impacts](#). These advancements offer more opportunities for artificial intelligence (AI) technology and automated tractors in the future.

Currently [fully automated tractors are being developed, but with consideration of farmer needs and practices](#). Automated equipment may be able to save time and labor, but they still need to be practical, which is why most are being developed with a cab, seat, and steering wheel. There is no one answer to how automation and AI will affect agriculture, but combining new technology and traditional practices can offer solutions for the future.

### News and Views

**USDA Updates:** USDA 1) announced an investment of more than \$46 million in the [Sustainable Agriculture Research and Education](#) (SARE) program and 2) highlighted the [critical role of agricultural R&D](#) at the G20 meeting of agricultural chief scientists.

### Far Side of the Barn

**Heading Home:** A one-year-

Visit our website



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

old Australian shepherd took an epic trek across [150 miles of frozen Bering Sea](#) ice.



## CAST Updates

### Celebrating CAST Advocate Dr. Edward C.A. Runge

The CAST Boards and staff would like to honor Dr. Edward C.A. Runge, College Station, TX, who died on April 10, 2023.

Dr. Runge, a retired researcher, professor, and chair in the Texas A&M University (TAMU) Department of Soil and Crop Sciences, was a strong supporter and advocate for CAST for decades. Just a few examples of his leadership to CAST includes serving as CAST president in 2007; contributing through CAST society members such as the Soil Science Society of America and the American Society of Agronomy; supporting the Borlaug CAST Communication Award (BCCA) annual event; providing generous financial support through CAST membership and donations; and attending annual meetings as his very busy schedule allowed. Most recently, he returned to Ames, Iowa, in October 2022, to help CAST honor its 50th anniversary as an organization.

Kent Schescke, CAST EVP/CEO, recalls, "I had the opportunity to meet Ed shortly after I came to CAST in 2015, and valued his wisdom, guidance, and experience. In addition to all of his professional work, he was a strong leader and proponent of CAST. I also enjoyed seeing him at the World Food Prize Borlaug Dialogue event or at many of our annual CAST meetings."

"One of the memories I cherish most was the opportunity my wife and I had on a trip to visit Texas A&M University. Ed and his wife Pat hosted us in their home and then joined us for dinner. I heard many great stories about Dr. Norman Borlaug, and their time working together. I also learned a lot about CAST and Ed's extensive involvement and leadership over the years. He accomplished many things throughout his career and touched thousands of lives in the process."

To learn more about Dr. Runge's extraordinary life and career, please see [TAMU's tribute to him](#) or [his obituary](#). We extend our deepest sympathy to Mrs. Pat Runge and her family.



Dr. Edward Runge.

Photo provided by Texas A&M AgriLife.



Dr. Edward Runge, far left, during the CAST 2022 Fall Annual Meeting with the current and other past CAST presidents.

Photo provided by Dr. Dwight Tomes.

# Animal Agriculture and Environmental News

**Biosecurity:** USDA officials encourage [stronger biosecurity measures](#) as risk of Avian Influenza increases in approaching summer months.

**HPAI Vaccine:** [The U.S. is unlikely to adopt a vaccine for Highly Pathogenic Avian Influenza](#) (HPAI) and will continue to cull infected flocks.

**Beef Demand:** Despite rising beef prices, [consumer demand remains steady](#).



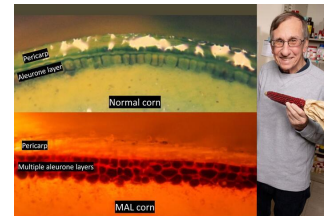
Kansas State University cattle experts explain how cattle producers can [best manage their resources](#).

## Food Science and Safety News

**Consumer Trends:** A new Purdue University survey tracks [consumer trends](#) for food demand, security, and satisfaction.

**Traditional Markets:** [WHO seeks to adopt safe food messages in traditional markets](#) by working with individual member states to increase food safety regulations.

**Drinking Milk:** Recent research highlights the [benefits milk has](#) on the brains of adults between the ages of 60 and 89 years old.



In a new study, University of Illinois scientists show it's possible to increase [iron up to 35% and zinc up to 15%](#) compared to parent lines simply by adding cell layers in corn bran.

## Plant Agriculture and Environmental News

**Cropland:** [Climate change threatens cropland](#) this year, as farmers begin planting season, and Farm Bill debates heat up along with temperatures.

**Drought Reduced:** The drought predicted in Utah and much of the West has been [drastically reduced, after record snowpack](#), and high runoff this spring.

**Strawberries:** Here are five strawberry varieties that are selectively bred for [Fusarium wilt resistance](#) and high yields.



Researchers at four universities say that increasingly warmer weather patterns in the Corn Belt could increase the growth of a toxin that would swell farmers' losses and threaten an important food source over [the next two decades](#).

## International News



**Giant Maize:** An ancient species of giant corn plant has been found in the Mexican mountains. It grows twice as large and has strange [aerial roots that drip a slime](#) that could revolutionize agriculture and end farming reliance on chemicals.

**Global Food Security:** The International Maize and Wheat Improvement Center provides an analysis of how the Russia-Ukraine war will [impact global food security](#).

**Import Ban:** Along with honey and meat, Hungary's government has [banned the import](#) of 25 Ukrainian products.



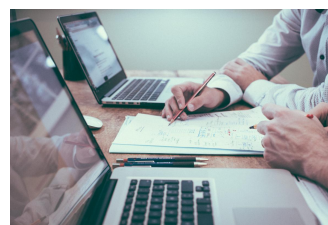
**Peru and Mexico have boosted their berry production [hundreds of times over](#) in 10 years.**

## General Interest

**Future of Farming?** A new computer science study offers a radical new way to think about agriculture and its [potential benefits for farming](#).

**Planets:** An international team of astronomers announced the [first exoplanet discovered](#) through a combined approach of direct imaging and precision measurements of a star's motion on the sky.

**Insects:** Artificial light doesn't actually attract insects but instead [interferes with the control systems](#) they use to orientate their body when flying.



**This article from Iowa State University looks at the world's spending on [agricultural research and development](#).**

## Photo Credits

Far Side from Mandy Iworrigan via AP. Food from Jack Juvik/U of Illinois. General from Scott Graham/unsplash. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service, Constant Contact, or CAST.

## 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

- \* 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

- \* 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
- \* Global Teach Ag Network
- \* Innovation Center for U.S. Dairy
- \* Iowa State University

- \* 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.*

## 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
- \* 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 Georgia
- \* 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, Biotechnology and Natural Resources

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,  
 Agricultural, and Environmental Issues

*\*\* With assistance from Colleen Hamilton (Membership Specialist) and Charlotte Brockman (Communications Project Coordinator)*

*CAST provides Friday Notes as a benefit to its members. Please do not forward, edit, copy, or distribute the Notes in any form to nonmembers without the express permission of the CAST CEO/EVP Kent Schescke (kschescke@cast-science.org). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits. Contact Colleen Hamilton at 515-292-2125 or [chamilton@cast-science.org](mailto:chamilton@cast-science.org), or [CLICK HERE](#) for CAST membership information.*

**Council for Agricultural Science and Technology**  
[\[www.cast-science.org\]](http://www.cast-science.org)

