



*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

Save the date:  
October 4, 2022, 7:30-  
11:00 am (EST)

On October 4, Virginia Tech's [Global Agricultural Productivity Report](#) and USDA's [Sustainable Productivity Growth Coalition](#) will jointly host a special event on "Accelerating Agricultural Productivity Growth for a Sustainable, Resilient World". More information will be available in the coming weeks.

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### CAST College Corner

[Mississippi State University](#) is using its supercomputer and drones to provide quick info to farmers.

[North Carolina State University's](#) Department of Crop and Soil Sciences will investigate whether or not enhanced efficiency fertilizers could benefit both farm profitability and the environment.

A [University of Kentucky](#) senior

**July 29, 2022**

## Microplastics: An Impact on Food and Agriculture

Microplastics are fragments of any type of plastic less than 5 mm in length, according to the [U.S. National Oceanic and Atmospheric Administration](#) (NOAA).



Microplastics and other marine debris are a problem for more than 700 species, with [multiple detrimental impacts](#). The eastern oyster is an important commercial aquaculture species that [has been shown to eat microplastics](#).

Microplastics [can also impact agricultural lands](#) via sewage sludge, the solids that are filtered out of wastewater, which are commonly used to fertilize agricultural fields. Microplastics get into the wastewater originally through laundry, personal care products, and urban runoff.

There are [ways to reduce your own use](#) of microplastics.

### News and Views

**USDA Updates:** The USDA announced 1) an [additional investment of more than \\$14 million](#) to support agricultural workforce training that will increase the resilience of the U.S. meat and poultry processing sector, 2) a new \$1 billion [Community Wildfire Defense Grant](#) program, and 3) a report showing the [number of farms and their average size](#).

**Ukraine Updates:** Ukraine has around [\\$10 billion worth of grain available for sale](#) in the wake of a deal signed with Russia to unblock supplies and will also have a chance to sell the current harvest. A new report

is spearheading research to help growers in Kentucky improve quality of vegetable transplants.

## CAST Social Media

Visit our website



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

estimates Russia has [stolen Ukrainian grain and steel](#) that is worth hundreds of millions.

**HPAI Updates:** The Iowa Department of Agriculture and Land Stewardship announced that [the last commercial Iowa poultry farm has been released](#) from highly pathogenic avian influenza quarantine restrictions.

## Far Side of the Barn

**DIY Swimming Pool:** Young farmers from Europe are beating the heat by building a DIY [swimming pool with hay bales](#).



## CAST Updates

### Upcoming BCCA Event



Save the date—on October 19 the Borlaug CAST Communication Award (BCCA) event will be held at the World Food Prize in Des Moines, Iowa.

[Dr. Martin Wiedmann](#)—Gellert Family Professor of Food Safety, Department of Food Science in the College of

Agriculture and Life Sciences at Cornell University—will receive the 2022 BCCA.

*The event will be recorded and the video will be released the following day.*

### CAST Member Highlights

*Check out this space for highlights and updates from CAST organization members!*

This week CAST would like to [share a study](#) that was released by CAST nonprofit member [Association of Equipment Manufacturers](#) (AEM), “quantifying how widely available precision agriculture technology improves environmental stewardship while providing economic return for farmers.” More [information on this study](#) can be found here.

AEM partnered with the [American Soybean Association](#) (ASA), [CropLife America](#) (CLA), and the [National Corn Growers Association](#) (NCGA) on this study. (CLA and NCGA are also CAST nonprofit members.) AEM is the North America-based international trade group representing off-road equipment manufacturers and suppliers with more than 1,000 companies and more than 200 product lines in the agriculture and construction-related industry sectors worldwide. AEM has been a member of CAST since July 2021.

Join CAST’s efforts to communicate the science, technology, and innovation so critical to our food and modern agriculture system through [society](#), [nonprofit](#), or [company membership](#)!

**Cow Numbers Down:** The USDA's mid-year cowherd report shows [numbers are at their lowest since 2015](#).

**Managing Pastures:** Penn State Extension agronomists [outline pasture health practices](#) during the summer months.

**Livestock Fertility Analysis:** A company has [created a global platform](#) that provides fertility analysis products that enable livestock producers and breeders to accelerate reproductive performance.



Two universities were looking for alternative feed sources to use and found that cattle like [donuts, potato chips, and chocolate](#).

## Food Science and Safety News

**Food Safety Facility:** A company has broken ground on [a \\$70 million expansion](#) of its food safety facility in Michigan.

**Recalls over Nightshade:** A fresh vegetable company is [recalling their spring salad mixes](#) as they have the potential to contain toxic hairy nightshade.

**Food Prices:** Prices of some food items like cooking oil, coffee, and avocado are starting to drop though they still remain relatively high, the [latest food price data shows](#).



The world's largest vertical farm recently opened. The facility can [produce two million pounds of leafy greens](#) annually, all grown under a hydroponic system.

## Plant Agriculture and Environmental News

**Moisture Stress:** For the first time this summer, the U.S. Drought Monitor indicated moisture stress in each of the [top 18 corn growing states](#).

**Crop Insurance:** Industry leaders told members of the House Agriculture Committee that larger farmers would [leave the crop insurance program](#) if Congress went along with proposals to cap crop insurance premium subsidies.

**Nematodes:** With a rapid life cycle and estimated annual \$1.5 billion yield loss potential, [soybean cyst nematode](#) has consistently been rated the most damaging soybean pathogen in North America.



The USDA's Forest Service is initiating emergency fuels reduction treatments to [provide for the long term survival of giant sequoia groves](#) against immediate wildfire threats.

## International News

**Animal Welfare:** A study is warning that the UK's [high animal welfare standards](#) face a "clear and present danger" from post-Brexit trade deals without

tougher government rules.

**CAST Task Force Report:** Check out the report released April 2018, [Scientific, Ethical, and Economic Aspects of Farm Animal Welfare](#).

**Ag Parks:** India, Israel, the UAE, and the US have announced a collaborative project to establish "[integrated agricultural parks across India](#)" in order to address the mounting global food security crisis.



**A company based in Singapore values agriculture and is looking to make the [small island an agricultural player](#).**

## General Interest News

**Invasive Species:** A respected scientific institute has classified domestic cats as an "invasive alien species," [citing the damage they cause](#) to birds and other wildlife.

**Tractor Ride:** A couple is driving their tractor to Alaska from Nebraska to [raise funds for charity](#).

**Fuel:** The [Next Generation Fuels Act](#) is being introduced in the U.S. Senate. Results from a University of Nebraska-Lincoln study show that if 10% of Nebraska's non-flex fuel vehicles switched from E10 to E30, carbon dioxide emissions would [decrease by 64,000 tons per year](#).



**The migratory monarch butterfly has been [categorized as "endangered"](#) by the International Union for the Conservation of Nature, joining its "Red List" of threatened species.**

## Photo Credits

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- \* 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

- \* 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
- \* Penn State University
- \* Poultry Science Association

#### 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
- \* Corteva Agriscience
- \* CropLife America
- \* Crop Science Society of America
- \* Innovation Center for U.S. Dairy
- \* Iowa State University

#### \* Rural Sociological Society

- \* Society for In Vitro Biology
- \* Society for Range Management
- \* Soil Science Society of America
- \* Syngenta Crop Protection
- \* The Fertilizer Institute
- \* The Minor Use Foundation
- \* 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
- \* 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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The Science Source for Food,  
Agricultural, and Environmental Issues

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

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