



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 Agri-Pulse summit featured insightful sessions including [“How Will We Measure Success with Carbon Sequestration and Reduction?”](#)—panelists included Debbie Reed, Frank Mitloehner, Marty Matlock, and Barb Glenn.

An April 20 webinar will focus on the [“Beef Industry’s Environmental Hoofprint: Sustainability & Policy Perspectives.”](#) Presenters include Jeff Simmons (Elanco and [2013 BCCA](#) winner)

USPOULTRY and its foundation operate a comprehensive research program, and they are accepting research pre-proposals from colleges, universities, and research facilities for the [2021 Fall Research Competition](#).

The full education program for the [2021 Midwest Poultry Federation Virtual Convention](#) is [here](#).

## CAST College Corner

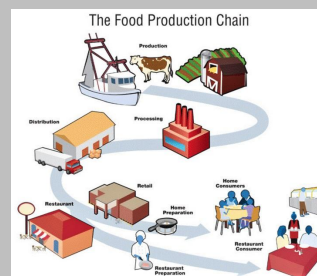
Seven [North Carolina A&T State University](#) faculty members are among the top 2% cited science

April 9, 2021

## Food Supply Chain

*Only as strong as the weakest link*

Real or imagined shortages--from toilet paper to pepperoni--have hit the headlines in the past year. Now, computer chips and wood products are causing concern, and a [ketchup shortage](#) might leave burger lovers in a pickle.



The food supply chain has always been important, and experts are considering how the pandemic might change its fundamentals. John Anderson--University of Arkansas—is an ag economics expert, and in this *Market-to-Market* segment called [“Reevaluating Risk, Understanding Vulnerability.”](#) he discusses food supply changes wrought by the pandemic. Anderson was a co-chair of the recent CAST Commentary [Economic Impacts of COVID-19 on Food and Agricultural Markets](#). The other co-chair of the paper, Jayson Lusk--Purdue and [2017 BCCA](#)--often writes about the supply chain, and in his newest blog entry, he focuses on “trends and causes of [agricultural productivity growth](#).”

Many factors affect the supply chain, but when it comes to food, consumers rely on strong, productive links.

## News and Views

**WASDE Changes and Conservation Practices:** The USDA announced [changes coming](#) to the *World Agricultural Supply and Demand Estimates* report starting May 12. The agency also reported a partnership with private landowners to [protect more than 5 million acres](#) of wetlands, grasslands, and farmland.

**COVID-19 and State Case Rates:** Coronavirus cases are rising in certain states. This regularly updated “map tracker” shows [how each state is doing](#).

**Rural Rates:** The number of new COVID-19 infections grew last week, while the number of COVID-related deaths dropped. This site looks at [rural America’s current rates](#).

**Vaccines on Campus:** Universities are deciding [how to deal with the vaccination issue](#): A few, such as Cornell, will require vaccinations; some, such as Florida, are involved with vaccine

researchers in the world.

The [University of Nevada-Reno](#) Cooperative Extension will offer a program that enables local veterans to get hands-on training in the art of beekeeping.

Twenty-six [Penn State University](#) students are serving as data collectors and managers in a nationwide research study to understand mask usage on college campuses.

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

## CAST Social Media

Visit our  
website



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

trials; and most want to get students vaccinated quickly. For example, if supplies are available, Iowa State will hold a [mass vaccination this month](#).

## Far Side of the Barn

**They're Here! (video):** Filling the air with their buzzed mating calls, [billions of cicadas](#) are set to emerge this spring.



**More Buzz (video):** A man in New Mexico returned to his car after grocery shopping and found [it had been invaded by a swarm of 15,000 bees](#). Luckily, a firefighter who is a beekeeper came to his aid.

**Eagle Eye (video):** This [live cam overlooks a bald eagle nest](#) high in a white oak tree in a valley north of Decorah, Iowa.

## CAST Updates

### CAST Happenings



#### BCCA Winner Announced May 11

The [Borlaug CAST Communication Award](#) (BCCA) is presented annually for outstanding achievement by a scientist, engineer, technologist, or other professional working in the agricultural, environmental, or food sectors for contributing to the advancement of science in the public policy arena. During the past eleven years, this prestigious award has been presented to [accomplished, influential scientists and communicators](#). The announcement for the 2021 BCCA winner will be held May 11. Watch for further details in subsequent *Friday Notes* editions.

### CAST Forthcoming Publications

This year, CAST will continue its successful publications schedule--with the rollouts, presentation videos, Ag quickCASTS, and student study guides that come with them. [Check this site for a list of the many papers in progress](#); the following list includes the publications set for earliest completion:

*The Role of Agricultural Science and Technology in Climate 21 Project Implementation*(Commentary)

*Goals, Strengths and Limitations Governing the Use of Life Cycle Assessment (LCA) in Food and Agriculture* (Commentary) Chair: Marty Matlock, University of Arkansas

*GMO Free—The Impact on Consumers, Retailers, Farmers, and the Environment*(Issue Paper)  
Chair: Brandon McFadden, University of Delaware

## Animal Agriculture and Environmental News

**Sustainable Beef:** A new study confirms [the U.S. beef industry is increasingly sustainable](#)—thanks to creative uses of technologies, improved herd genetics, and increased grazing management.

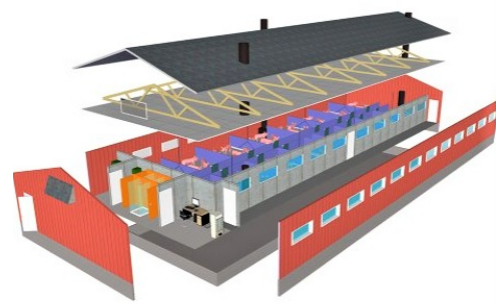
**Poultry Resources:** This U.S. Poultry & Egg Association site provides links to [research education resources](#), upcoming events, and more.

**Poultry Fertilizer Techniques:** An article in the *Soil Science Society of America Journal* looks at various rotation practices dealing with poultry litter in [an effort to minimize unwanted nutrient accumulation](#).

**Flea and Tick Season:** An Ohio State University veterinarian explains why pet owners should look for warning signs and [symptoms of flea and tick problems](#).

**Genetically Modified Smelt:** Millions of years before scientists created genetically modified Atlantic salmon with genes from two other fish, [nature created genetically modified smelt](#) with a gene from herrings.

**Horse Foal Virus:** University of Kentucky researchers have preliminarily identified a [novel Rotavirus associated with a virus](#) in very young foals.



Some producers are [adapting structure, equipment, and management practices](#) to help pigs cope with increased weather extremes.

This pig expert says 2021 has started with [a few surprises in the global pork market](#), as he shares his quarterly views.

## Food Science and Safety News

**USDA Programs:** Sign up for the second round of the [Coronavirus Food Assistance Program](#) opened April 5. Check [here for more details](#). Also, the USDA took action to support the [Supplemental Nutrition Assistance Program](#).

**Food Laws and Safety:** Wyoming is [debating a “Food Freedom” measure](#) to open more direct consumer purchases from producers, and New Hampshire is considering a raw milk bill.

**Gut Bacteria and Brain Function:** Some researchers believe that the [microbiome may play a role in regulating how people think and feel](#).

**Culinary Grace and Art (video):** This profile shows the inner workings of a [Michelin Star award-winning restaurant](#).

**Milky Way:** A university expert explains why milk is [healthy and free of any antibiotics](#).

**Mango Breakthrough:** University of Florida scientists [sequenced the genome](#) of the “Tommy Atkins” mango—valued for its long shelf life, pest resilience, and other traits.

**When Giving Up Caffeine:** According to this site, [caffeine withdrawals are real](#).



A United Nations report estimates that [17% of the food produced globally each year is wasted](#). The CAST publication, [Food Loss and Waste](#), uses a data-driven approach to provide an overview of the food loss and waste issue.

## Plant Agriculture and Environmental News

**From the Woods Today (video):** The University of Kentucky provides a [weekly broadcast about forestry](#) and natural resources.

**Winning the Furrow (video):** This article looks at ways to [enhance yields and profitability](#) with the use of in-furrow fungicides, nitrogen fixation products, and more.

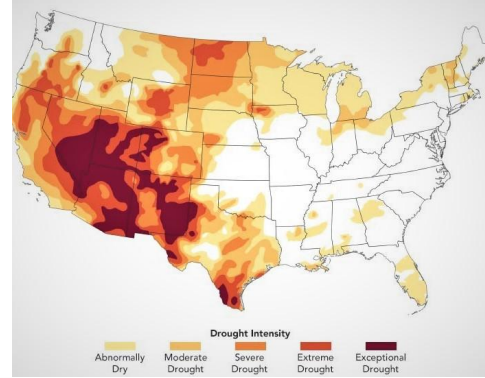
**Friendlier Grass:** USDA and University of Georgia researchers are hoping centipedegrass can help [make residential lawns more pollinator friendly](#).

**Better Barley:** This article from Crop Science Society of America discusses breeding barley [for a changing climate](#).

**Soil, Carbon, and Organic Agriculture:** North Carolina State University researchers are investigating [how soil carbon and soil health might mix](#) with organic farming.

**Cash Cover Crop:** A St. Louis startup agriculture company says it's [developed a cover crop](#)—CoverCress—that will eventually generate income for farmers while helping mitigate climate change.

**Drainage Water Recycling:** An Iowa State University report explains [research about drainage management systems](#) designed to capture water during wet periods so it can be used later.



**Almost half of the United States is experiencing some level of drought, and it is expected to worsen. This hydrologist explains why drought-breaking rains are less common and droughts last longer across much of the U.S. West. Check here for the latest [USDA Crop Progress Report](#), and click here to access the [CAST publication Aquifer Depletion and Potential Impacts on Long-term Irrigated Agricultural Productivity](#).**

## International News

**Cosmic Garbage Collectors (video):** Space is fertile territory for various ventures, and a Japanese startup says it has launched a satellite to test [technologies to remove space debris](#).

**Unwelcome Visitor:** A pig carcass on the beach is the first case of [African swine fever reported in Taiwan](#).

**African Swine Fever (related to above):** ASF is a highly contagious disease that infects pigs, and there is no vaccine against it. The disease [cannot be transmitted from pigs to humans](#) and is not a threat to human health.

**Royal Mummies on the Move (video):** In an artistic, lavish spectacle, [22 Egyptian mummies were moved](#) to new resting places in the national museum.

**Sumo Citrus:** The sumo citrus might look like a wrinkly orange with a knob akin to the top knot worn by the Sumo wrestlers, but [many are lauding its taste](#) and accessibility.



**New Zealand's sheep producers are stressed by low wool prices, but it is still [amazing to see 25,000 sheep sheared in 10 days](#).**

## General Interest News

**Disease Fighters:** While some scientists are focused on coronavirus, others—such as these Cal Poly specialists—are conducting [research on other terrifying diseases](#) like ebola and anthrax.

**Marine Ecosystems:** The University of Florida is involved with aquatic preservation, and this [specialist focuses on coastal marine ecosystems](#), especially seagrass meadows.

**Big Rigs, Small Town, Farm Pride (video):** A small Iowa town has a [spring rite of passage](#) in the form of a tractor parade for the high school seniors.

**Ingenuity helicopter: first powered flight on Mars**  
Expected to make its first flight attempt no earlier than April 11

**MAIN MISSION:** First test of a powered flight on another planet

Test flights during a 30-Martian-day\* experimental window

Take off, fly, and land with minimal commands from Earth sent in advance

**PERSEVERANCE ROVER:** 2.2 m

**INGENUITY:**  
1. hitched a ride on rover's belly, which touched down on Feb 18  
2. deployed to Martian surface on Apr 3

• FLIGHT ALTITUDE: 10 to 5 m  
• RANGE: up to 300 m  
• MARS ENVIRONMENT: Very thin atmosphere, less than 1% the density of Earth's  
• HELICOPTER WEIGHT: 1.8 kg on Earth, 0.68 kg on Mars

\*Martian days: 24 h 37 mins  
Earth days: 23 h 56 mins

Sources (including helicopter image): NASA/JPL-Caltech

AFP

**Batteries Included (video):** A Penn State professor explains the future of lithium iron phosphate [batteries used in electric vehicles](#).

**Bird Ballet (video):** Flocks of starlings perform precision [aerial acrobatics known as murmurations](#).

**Farming Pine Needles:** Some North Carolinians have made a lucrative business around raking, baling, and [selling pine needles as mulch to landscapers and homeowners](#).

The Ingenuity helicopter survived its first night on the harsh surface of Mars—a [milestone ahead of the rotocraft's historic first flight](#).

## Photo Credits

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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
- \* Aquatic Plant Management Society
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- \* 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

*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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- \* Cal Poly-San Luis Obispo
- \* Cornell University
- \* Iowa State University
- \* Kansas State University
- \* Mississippi State University
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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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