



*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..... Click to Read

[New CAST Organizational Member Focused on Communication--P. 2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)

#### Underwater Pics



Check out the stunning images captured by the winners of the 2019 [Underwater Photographer of the Year Contest](#).

#### Radio Newline

The [USDA Radio site](#) provides various audio stories about crops, livestock, prices, and more.

#### Livestock Show Is a Go

The World Pork Expo was canceled due to fears about contagious disease, but the [purebred livestock show](#) that typically runs with it will still be held in Des Moines June 2-8.

#### Celebrating Goat Day



Goats are not just funny, they are a key part of global agriculture. Tuskegee University [recently held its annual goat day](#).

May 10, 2019

## Our Future Depends on Change

*A new UN-backed report states land and sea use is the leading cause for the degradation of our planet*

Since 1970, global food crop production value has increased 300%, but the growth has come at the expense of land and forest degradation worldwide, according to an extensive report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).



The report names land and sea use as one of the top five drivers for the recent changes in nature, but it also emphasizes the importance of food production for cultures and societies around the world. You can read the [full news release here](#).

Most news outlets are focusing on [overall human activity](#) as the reason for the decline in natural habitats and species. Many think the [current global response is insufficient](#)--and transformative changes are needed to restore and protect nature.

Farmers and agriculture groups are inherently tied in with such reports, and environmental concerns have been at the forefront as long as food production has occurred. The IPBES report will generate various responses. For example, the British National Sheep Association says [farmers are improperly portrayed and unfairly blamed](#) for environmental issues. Other farm groups have explained that food production techniques in many parts of the world are becoming more sustainable.

Borlaug CAST Communication Award winners often make thoughtful, science-based comments about agriculture sustainability. We recommend you follow [Frank Mitloehner](#), [Marty Matlock](#), [Jayson Lusk](#), and the [seven other respected experts](#). They are all working on intelligent, common sense solutions to the challenges of food production and environmental sustainability.

## News and Views

**Trade, Tariffs, Talks, and Agriculture:** [President Trump announced tariffs](#) on \$200 billion worth of Chinese goods, [China vowed to](#)

### Ag Award Info

Iowa State University's [Leopold Center for Sustainable Agriculture](#) seeks nominations for its annual sustainable agriculture award. [Nomination forms are located here.](#)

### Ag and Tech

North Carolina A&T State University has a rich [history of innovation and application](#) of cutting-edge technology throughout its College of Agriculture and Environmental Sciences.



### Science and Agriculture

A University of Missouri professor, Thomas Spencer, was [elected to the National Academy of Sciences](#) in light of his research on livestock fertility and reproductive biology.

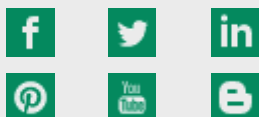
### Facebook Study

A Cornell researcher is collaborating on a [study examining Facebook data](#) to look for patterns in "problematic sharing," the posting of links to stories that have already been flagged or proven false.

### Send in Ideas

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

### CAST Social Media



[implement countermeasures](#), and trade talks between the two countries will apparently continue. The implications for agriculture are uncertain. Vice President Mike Pence said the White House is [considering providing additional assistance to farmers](#) to compensate them for the income they have lost from the trade war with China.

**Pesticide Ruling:** California will [ban the widely used pesticide, chlorpyrifos](#)--the [debate continues](#) about its effects.

**USDA Moves:** The USDA has narrowed the list of sites under consideration to become [locations for the organization's research arms](#). Some researchers still debate the premises behind the moves.

**USDA Nominee:** While Mindy Brashears is waiting for confirmation as the Deputy Under Secretary for Food Safety, she is [meeting with experts involved with science and communication](#)--including representatives from the Council for Agricultural Science and Technology.

## News from the Far Side of the Barn

### Pizza Dreams

**(video):** This little girl wants to [sleep and eat pizza](#) at the same time.



**Yell Like Hell (video):** This hiker demonstrates what to do [if you get attacked by a musk ox](#).

### A Butterfly Waterfall

**(video):** Millions of monarch butterflies spend the winter in Mexico, and [when they take flight](#) (past the 3-minute mark of the video), the sounds and views are magical.

Can't No Heifer Tell Me Nothing: The [Peterson brothers are at it again](#), and this parody of "Old Town Road" focuses on the realities of cattle farming.

## Cattle, Research, and Communication

*New CAST organizational member promotes credible, science-based information*

The National Cattlemen's Beef Association (NCBA) recently joined CAST and appointed Mandy Carr Johnson for the Board of Representatives. Dr. Carr is the Sr. Executive Director for the Science, Culinary, and Outreach team at NCBA. This department includes programs and a team of 18 staff members focused on human nutrition research and influencer outreach, product quality, sustainability, and beef safety research--as well as the NCBA Culinary Center, funded by the Beef Checkoff.



**Mandy Carr Johnson**

On behalf of the Beef Checkoff, the National Cattlemen's Beef Association manages programing to help build demand for beef. One of the cornerstones of this work is research in the areas of beef safety, human nutrition, product quality, sustainability, and culinary and consumer market research. These research results are shared on

[beefresearch.org](http://beefresearch.org) and are leveraged into consumer and influencer information on [beefitswhatsfordinner.com](http://beefitswhatsfordinner.com).



Like CAST, NCBA and the work it conducts on behalf of the Beef Checkoff provide credible, science-based information to a wide audience through online resources and personal engagements.

## Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 turtle pic from msn.com, globe pic from associationsnow.com, goat pic from lottery.com, and Peterson brothers photo from iptv.org. Animal Sec. map from sciencemag.org and turkey pic from usda.org. Food Sec. coffee pic from precisionnutrition.jpg and waste pic from cropmobster.com. Plant Sec. sheep pic from feedio.net. Inter. Sec. countryside pic from geneticliteracyproject.com and dust storm pic from sunraysiadaily.com. Gen. Sec. brain graphic from healthyfellow.jpg and cell graphic from cornell.edu. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



## *Animal Agriculture and Environmental News*



**Manure Happens:** This map shows that most manure is where farmers need it--in their own backyards. Researchers used data on livestock density and

**Put Another Beef Cut on the Barbie (video):** As grilling season gets fired up, cattle producers are [celebrating Beef Month](#) and promoting the nutrients in their product.

[calculated the annual amount of phosphorus](#) excreted by cattle, pigs, chickens, sheep, and goats globally.

**Pork Situation in China:** The UN is projecting at least a [10% cut in China's pig meat output](#) in 2019 due to an African swine fever outbreak.

**Pig Precautions:** Pork associations and veterinarians released additional information to pork producers about the risks of African swine fever and other foreign animal [diseases from being transmitted via feed](#) or feed ingredients.



**Grazing in the Grass:** Kansas State University researchers found that a [grazing system shown to be beneficial](#) for the performance of steers also has great potential for cow-calf producers.

**Talking Turkey:** This overview of the [progress made in the raising of turkeys](#) during the last 25 years focuses on the fact that operations now involve more management of people and processes.

**Poultry Automation:** With growing shortages of skilled labor, this poultry company is looking for [ways to intensify automation levels](#) in poultry processing plants.

## *Food Science and Safety News*

**Acquired Tastes (video):** A host of biological and cultural factors explains [why adults warm up to foods they hated as children](#). Maybe that explains reactions to vegemite, kale, and broccoli.

**Something Fishy:** This company is racing to bring to market what is known as [cell-based seafood](#)--grown from cells in a lab, not harvested from the oceans.

**Research about Food Waste:** Check out the solid, science-based information in the CAST Issue Paper, [Food Loss and Waste](#). Related link in caption at right.

**Tech My Food:** According to this report, technology [helps food manufacturers produce more efficiently](#) for a growing world population.



**Beverage Preferences:** This research tries to explain variations in our taste [genes that could explain our beverage preferences](#).

**Edible Seaweed:** This foodie says [kelp is delicious, versatile, and sustainable](#) for ocean farming.



Fighting food waste [by finding common sense tactics](#) to "use the useless." Related link at left.

## *Plant Agriculture and Environmental News*



**Rising Waters and Ag (video):** Flooding on the Mississippi is still [affecting agricultural product shipments](#).

**Soil Study:** At the University of Nevada-Reno, the Sullivan Lab seeks to understand the fundamental role of soils. Check out their [programs and research here](#).

**Wetlands and Water Quality:** Wetlands [improve water quality downstream](#), protect nearby towns from flooding, enhance wildlife habitats, and provide outdoor recreational and educational opportunities.

**Nitrogen Management:** This report provides a comprehensive dataset about [on-farm nitrogen management practices](#) in North Carolina to improve operations, economics, and environmental outcomes.

**Lawn Zen:** This archived blog covers [issues such as pink grass, robotic mowers](#), and Ray Bradbury's lawn. See related item in caption at upper right.



**Get Off My Lawn!?** This editorial says [lawns are awful for the planet](#)--with chemical overuse, water waste, and pollination destruction. See related link at lower left.



**Get Tiny or Get Out:** Scientists have developed gene-edited tomatoes to have tinier leaves and stems. This could make them more productive for growers with limited space.

**Corn Planting Info:** Research [analyst Michelle Mensing looks at corn planting trends](#), and she considers machinery, weather, and other factors. Note: Michelle was a talented Iowa State University student intern at CAST a few years ago.

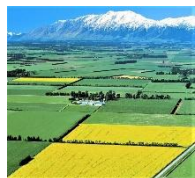
## International News

**McMeatless? (video):** The McDonald's chain is now [selling a vegan burger in Germany](#). A related article considers veggie burger nutrition and points out the [processed-food aspects of the new trend](#).

**Students Show the Way:** Young people in the Philippines are helping to transform their [elementary schools into small-scale gardens](#) in order to supplement the food supply of local residents and schools.

**Dairy Growth in India:** India's dairy producers have skimmed milk powder to thank for a [revival in dairy exports](#) after four years of stagnating growth.

**Corn Collaboration in China:** Cargill will invest \$112 million to expand its [corn-processing facility in China](#) as part of a joint initiative with the government there.



**Cutting Emissions Brings Controversy:** New Zealand is [proposing ambitious targets](#) to cut the country's nonagriculture carbon emissions to zero by 2050--but some farmers are upset with cuts they are required to make.

**Weed Control:** Chinese researchers recently [generated several herbicide-tolerant wheat germplasms](#) using base editing to facilitate weed control in wheat fields.



A [huge dust cloud recently swept](#) across the city of Mildura in Australia, but many old timers still speak of the [freak Melbourne dust storm in 1983](#).

## General Interest News

**A Load of Rubbish (video):** Using pressure sensors, a prototype system that can [automatically sort recyclable trash](#) has been developed.

**Students and Farm Markets (video):** A new farmers market is bringing fresh, locally grown fruit, veggies, and meat to the Cal Poly campus, and it [offers a variety of products made by students](#).

**Graduation Time:** Commencement activities abound at universities around the country, and [this Purdue biochemistry graduate](#) enters the work force with the distinguished G.A. Ross Award in his resume.

**Organs in the Air:** University medical experts are trying to reduce transport inefficiencies that contribute to wasted organs for transplant. A [specially crafted drone is a key](#) to the process.

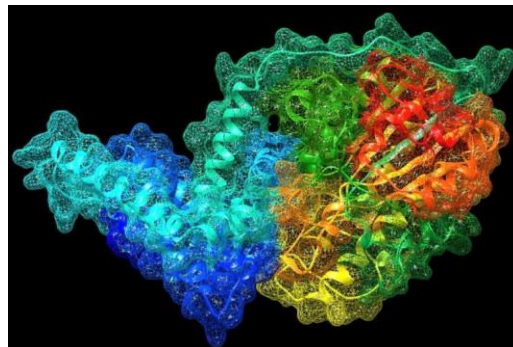
**Aquifer Use:** The Ogallala Aquifer lies under eight states and supports much agriculture, but reports indicate [it is being used faster](#) than it can be replenished in some areas.

**Aquifer Research (related to above):** Check out the CAST Issue Paper titled [Aquifer Depletion and Potential Impacts on Long-term Irrigated Agricultural Productivity](#).



**Can You Read My Mind? (video):** According to this neurotech research, [communicating through thoughts alone](#) is possible--with a little technical assistance.

**Bio-plastic:** Ohio State University researchers may have come up with a [material that can replace plastic](#). They call it a bio-plastic because it is made from bacteria and rubber.



Cornell food scientists discovered mcr-9, a gene so diabolical and robust that it [resists one of the world's few last-resort antibiotics](#).

## CAST Information

Check out CAST's page at the [YouTube site](#) to view highly regarded ag-science videos about probiotics, food safety, and water issues--or the latest video dealing with proposed mandatory labeling of GMO food items.



*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 Executive Vice President Kent Schescke ([kschescke@cast-science.org](mailto:kschescke@cast-science.org)). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits. Contact Melissa Sly at 515-292-2125, ext. 232 or [msly@cast-science.org](mailto:msly@cast-science.org), or [CLICK HERE](#) for CAST membership information.*

## 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 for Nutrition Nutritional Sciences Council
- \* 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
- \* BASF Corporation
- \* Cal Poly State University
- \* Corteva Agriscience, Agriculture Division of DowDuPont
- \* CropLife America
- \* Crop Science Society of America
- \* Entomological Society of America
- \* Innovation Center for U.S. Dairy
- \* Land O'Lakes
- \* 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 Carolina Biotechnology Center
- \* 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
- \* Tyson Foods
- \* United Soybean Board
- \* University of Nevada-Reno
- \* 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

- \* Cal Poly-San Luis Obispo
- \* Cornell University
- \* Iowa State University
- \* Kansas State University
- \* Mississippi State University
- \* North Carolina Agricultural and Technical State University
- \* North Carolina State University
- \* Purdue 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



**Dan Gogerty (Managing Communications Editor)**  
**Kimberly Nelson (Communications and Social Media Specialist)**  
**The Council for Agricultural Science and Technology**  
**4420 West Lincoln Way**  
**Ames, Iowa 50014-3447**



Phone: 515-292-2125, ext. 222 (Dan) and 230 (Kimberly)  
E-mail: [dgogerty@cast-science.org](mailto:dgogerty@cast-science.org) and [knelson@cast-science.org](mailto:knelson@cast-science.org)

**\*\* *With assistance from Carol Gostele (Managing Scientific Editor)***