As the first possible case of community-spread coronavirus is confirmed in California, the CDC warns that it will only be a matter of time before an outbreak of the illness occurs across the United States. The number of infected individuals changes daily across the globe and disrupts major events such as Venice Carnival in Italy.

Farmers from Washington state to Pennsylvania have shared how their operations have been affected by the virus. Stocks have oscillated in the wake of this growing concern, leading some to question whether the coronavirus could cause a recession.

This week, experts weighed in on the influence the outbreak will have on the economy and the first phase of the China trade agreement.

- An Iowa State University crop marketing specialist says concerns about the market began before the outbreak, but also notes that the economy is slowing in each country the virus has "hit."
- An NC State University agricultural economist took an example from 100-year-old history to discuss whether a virus could topple the economy.
- Experts from Oklahoma State University say "it's just too early to tell" the virus' impact on economic and agricultural trade outcomes until there is a better sense of the situation.

News and Views

'Cautionly Optimistic': Despite the concerns about the coronavirus affecting trade (see story above), many farmers feel optimistic about the long-term perspective of agriculture.

Rising Prices: Renewable fuel prices climbed 25% after the Trump administration decided to trim the exemptions for oil refineries.

Beef Exports: Brazil has been given the "OK" to export raw intact beef to the United States again.

Mixed Signals: President Trump stated on Twitter late last week that the federal government will support farmers while trade deals begin to take effect. Secretary of Agriculture Sonny Perdue clarified that the president's message is an "if" scenario.
California Polytechnic State University will recognize 80 years since the Poly Royal Rodeo began from April 17-18.

February 22-29 is National FFA Week. The organization's website is sharing stories from current and past members, and ways to celebrate.

Send in Ideas
CAST welcomes suggestions for future publications and projects.

CAST Social Media

News from the Far Side of the Barn

Houseplant Theater (video): This time-lapse of a kidney bean sprouting looks like some sort of waltz. Plus, plant enthusiasts can listen to their houseplants create unique melodies some call "singing."

A Bird Board Game (audio): Pairing science with game design, the board game "Wingspan" turns players into bird enthusiasts who are competing to build the best wildlife reserves.

Moldy Mayhem (video): Some molds are useful, others are deadly. Regardless, humans do have something in common with them: we both use digestive enzymes to break down our food.

CAST Happenings

Taking a Look Back: The One-year Anniversary of Issue Paper 63

Groundwater is the Earth's most extracted raw material. Approximately 70% of groundwater withdrawals worldwide are used to support agricultural production systems. In some areas, the use of groundwater typically far exceeds the rate at which it is naturally replenished, indicating that these critical groundwater resources are being slowly depleted. The CAST Issue Paper Aquifer Depletion and Potential Impacts on Long-term Irrigated Agricultural Productivity reviews the causes and consequences of groundwater depletion, with a focus on impacts to agriculture as the largest sector of groundwater use.

One year later, we are taking a look back at the publication's release and its impact since then. Check out a video recording of the chair author Dr. John Tracy's presentation as well as highlights from the rollout events in Washington, D.C.

Renew Your CAST Support for 2020

If you haven't renewed your CAST membership for 2020 yet, there are several convenient ways to do so. You may:

- Log in at https://www.cast-science.org/ and renew online;
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Don't hesitate to contact Colleen with any membership or login questions. Thank you for your continued support of CAST's work!

Forthcoming CAST Publications

Impact of Recruitment and Retention of Food Animal Veterinarians on the U.S. Food Supply is an issue paper looking at the challenges of recruiting and retaining food animal veterinarians in the United States—including factors such as consolidation, technology, funding, rural influences, student training, and financial strain.

Producing Food Products from Cultured Animal Tissues is a commentary that will focus on the issues surrounding cell-cultivated meat.

The Microbiome's Positive Impacts on Crops: A plant's microbiome holds many potential applications for pest control and yield enhancement. This paper will highlight the impact microbial products have on crop production and the importance of research.
Combining data from the USDA and other sources, researchers from the University of Nebraska-Lincoln found that U.S. water use in livestock production dropped 36% from 1960 to 2016 (story at left).

**The Need and Challenge for Effective Stewardship of New Pest Management Technologies in Agriculture** is a CAST Commentary that considers the use of genetically modified crops, weeds, and pests to help with crop management.

**Free Publications**

CAST papers are now available for free download on the newly formatted CAST website.

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**Friday Notes News Categories**


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**Animal Agriculture and Environmental News**

**Reducing Methane:** Adding a certain feed supplement to a dairy cow’s diet may reduce its enteric methane emissions by approximately 25%, according to a recent study from Penn State.

**Water Efficiency:** An analysis of U.S. water used for beef, pork, chicken, turkey, milk, and egg production shows that less water was used in livestock production in 2016 than in 1960.

**Tracking Tuna:** Texas A&M researchers are part of a team that is tracing the Pacific bluefin tuna’s travel habits, which is overfished for its popularity in sport fishing and culinary dishes.

**Recognizing Quality Care:** The 2020 Beef Quality Assurance (BQA) program recognized the outstanding beef and dairy producers in certain industry segments who have demonstrated animal care and handling principles as part of their day-to-day operations. See the 2020 recipients here.

**Marketing Consequences:** A graduate student says making honeybees “the face” of environmental marketing strategies deflates the importance of native bees. Instead, this University of Washington graduate student describes the problem with “bee-washing” and provides local-based solutions.

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**Food Science and Safety News**

**Curious Consumers:** A recent survey finds that curiosity drives consumption of new foods and nutrition facts are more influential than ingredient lists.

**Berry Good:** Some freeze-dried berry powders such as strawberry powder have been found to be excellent stabilizers in ice cream.

**Meat’s Color Palette:** Kansas State Research and Extension explains that off-color meat (e.g., beef that isn’t bright red) hasn’t gone bad but may have a different amount of oxygen present in it.
A Long Climb: UC-Davis animal scientist Dr. Alison Van Eenennaam discusses the technological challenges facing cell-cultured meat that could slow its entry into the market.

A Case For Food Research: A new white paper released by the Institute of Food Technologies discusses the disproportionate funding for food research in relation to its economic contribution.

Plant Agriculture and Environmental News

Spring Thinking (video): Mississippi State University reminds its communities that while it is still cold out, it’s time to start thinking about the annual upkeep of plants—such as pruning apple and pear trees.

Agrivoltaics: A project in Colorado is experimenting with harvesting both energy and plants on the same plot of land to increase productivity.

Unwanted Tastes: Grape-growers in British Columbia may find a common agricultural spray can help keep their grapes from taking on an unwanted flavor from drifting wildfire smoke.

A-maize-ing Genetics: NC State, Iowa State, TAMU, and Mizzou, along with other organizations, took part in a study that shows promise in utilizing exotic maize genetics to prepare an important grain for future climate challenges.

Related to Above: Another recent study found using predictions from DNA fingerprints (i.e., genome-wide predictions) could help reduce phenotyping in maize field testing.

International News

Insurance Policy (video): Approximately 60,000 new seeds were added to the Svalbard Global Seed Vault, the biggest seed deposit since the facility opened in 2008.

Airborne H2O: In Peru, water is collected from the air—specifically fog—to provide local communities with fresh supplies.

After the Fires (audio): Mudslides are likely in Australia after the devastating wildfires. This podcast follows how scientists are predicting when and where they will happen.

There’s an App for That: In response to billions of locusts damaging crops across East Africa, a Penn State team is creating an app that can locate and track insects to help with spraying efforts.
General Interest News

What the Lake Holds (video): A lake in Russia tells the story about how the climate has shifted over the past million years.

The 'Well to Hell': The nickname sounds scary, but the deepest hole in the world is only 9 inches in diameter, and it has bigger competitors now.

Prominent Mathematician: NASA highlights the impactful work of Katherine Johnson, a mathematician who worked on the calculations of many early and prominent NASA space projects. She passed away on February 24.

Mini Mississippi: At 1/65th scale, in a large warehouse located in Boston, researchers built a model of the Mississippi River to figure out how to save a vanishing coastline.

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.

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* National Corn Growers Association/Iowa Corn Promotion Board
* National Milk Producers Federation
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