



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](#)

Events and Announcements



British researchers [identified 50 new planets](#) using artificial intelligence--a technological breakthrough in astronomy.

CAST will release *The Importance of Communicating Empirically Based Science for Society* on September 21 with a [webinar the following day](#).

The [2020 Agri-Pulse Ag & Food Policy Summit](#)--a virtual event on September 21--will explore crucial links between food security and national security. Speakers include Ambassador Kip Tom, Secretary Sonny Perdue, Chef José Andrés, and others.

The [National FFA Organization](#) announced a record-high student membership of 760,113.

Click here to sign up for the World Food Prize [2020 International Borlaug Dialogue](#)—October 12-16.

September 4, 2020

Optimism and Unease as Harvest Time Approaches

An early full moon in September is called a "[Corn Moon](#)," and this year the beams shined on crops that [indicate bumper yields](#), even though [weather and other issues](#) cloud the outlook for some. Aside from the usual areas of drought and heavy rains, factors to consider as harvest



time approaches include: (1) Dry [weather, insect pests, and diseases](#) can still affect the yields, (2) last month's [derecho ruined millions of acres of crops](#), crumpled grain storage bins, and destroyed buildings, (3) Hurricane Laura [affected soybeans and other crops](#), while also [ruining rice storage](#) facilities, and (4) [financial issues](#) include everything from machinery to drying to transportation. Other factors such as trade affect harvest outcomes; see the Plant Section below for related links.

News and Views

Food Safety Forum: Many USDA departments are involved in hosting a [virtual public meeting on salmonella](#)—and a roundtable discussion with opportunities for public comment.

USDA Announcements: The USDA will allow [summer meal program](#) operators to continue serving free meals to all children into the fall months. The agency features information about many topics on its [weekly radio program](#).

Food and Innovation (podcast): Secretary of Agriculture Sonny Perdue sits down with Jon Entine (Genetic Literacy Project) to [talk about innovation in agriculture](#).

Research and Publishing: Jayson Lusk (Purdue) and Sunjin Ahn (Mississippi State) published *Non-Pecuniary Effects of Sugar-Sweetened Beverage Policies*—a [paper especially noteworthy for the peer-review process](#) it involves.

CAST College Corner

The [University of Nevada-Reno](#) is using a forest and wildlife area to support experiential learning, research, and creative activities.

The [University of Florida](#) is part of a team that received a large grant from the National Science Foundation to bring more technology into agriculture.

The Iowa Nutrient Research Center at [Iowa State University](#) announced funding for 11 new water quality and nutrient management projects.

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.

News from the Far Side of the Barn

A Wild Ride (video): A three-year-old girl (right) in Taiwan was caught in kite strings and pulled [100 feet in the air during a terrifying ride](#). She was shaken but unhurt.



Soaring High on Purpose (video): Famed magician David Blaine [used 52 large balloons to soar 20,000 feet](#) over the Arizona desert before he released and parachuted back to earth.

Taking to the Air (video): A Japanese company [successfully tested a manned flying car](#)—something that has been hinted at since the Jetsons buzzed around on 1960's TV screens.

CAST Updates

1890 Land-grant Universities Celebrate 130 Years



CAST Issue Paper Number 52 SPA Junio 2013

Impacto del Principio Precautorio en la Alimentación de las Generaciones Actuales y Futuras

La Estrategia de Riego de Oro...
Resumen
El presente artículo analiza el impacto del principio precautorio en la alimentación de las generaciones actuales y futuras. El principio precautorio es un concepto que se refiere a la precaución en la toma de decisiones cuando hay incertidumbre sobre los riesgos de daños graves o irreversibles. Este principio se aplica en el campo de la alimentación, especialmente en el uso de pesticidas y en la manipulación genética de los alimentos. El artículo discute los beneficios y los riesgos de la aplicación del principio precautorio en la alimentación y ofrece algunas recomendaciones para su implementación efectiva.

The Importance of Communicating Empirically Based Science for Society



Paper Releasing on Sept. 21
Webinar on Sept. 22

1890 Land-grant Universities Celebrate 130 Years of Cutting-edge Science, Education, and Community

August 30 marked the 130th anniversary of the authorizing legislation establishing the 1890 Land-Grant Universities (LGUs). Almost 30 years after President Abraham Lincoln signed the Morrill Act of 1862, the Second Morrill Act, creating our nation's historically black land-grant colleges, was successfully shepherded through Congress by Senator Justin Smith Morrill and signed into law on Aug. 30, 1890. Commonly referred to as 1890 universities, this thriving network of 19 universities has a legacy of educating first-generation and economically disadvantaged college students, and enhancing the resilience of limited-resourced farmers, families, individuals, and underserved communities.

CAST has two 1890 universities that are [Education Program](#) members--North Carolina A&T State University and Tuskegee University.

Tuskegee University recently [celebrated the 130th anniversary passage of the second Morrill Act](#). The week-

long celebration highlighted the universities leading in areas of research, world-class education, and shaping future generations. “Each of the 1890 universities have a longstanding legacy of excellence, dedication, and mission to advancing educational opportunities for African American students,” said President Dr. Lily D. McNair. “And today, our mission and purpose at Tuskegee University still remains the same; to nurture and challenge our students to grow to their fullest potential--this is the principal reason for our existence.”

North Carolina Agricultural and Technical State University [also celebrated the 130th anniversary of the Morrill Act of 1890](#). Higher education leaders, elected officials, and policymakers, business and community leaders joined in an online celebration of the 1890 land-grant universities anniversary, with a forum that explored the history and accomplishments of these institutions and the important role they play in the nation’s future.

Precautionary Principle Spanish Translation Available

Impact of the Precautionary Principle on Feeding Current and Future Generations was released in June 2013. The [Spanish translation](#) of the issue paper is now available. This paper looks at the history and purpose of the precautionary principle (PP) and examines problems of ambiguity, arbitrary application, and bias against new technologies. Because the publication (IP 52) is especially focused on the need to feed a growing population, the case studies center on agricultural issues such as pesticide use, genetically modified foods, and food irradiation. The authors state that the PP has played an important part in bringing attention to appropriate risk management. If it is applied in its more stringent formulations, however, the PP will suppress innovation, to the detriment of both the economy and human health.

The Importance of Communicating Empirically Based Science for Society

The commentary will be available for download on September 21. There will be a free webinar on September 22--you can [register here](#).

This paper discusses the crucial factors of what we define as empirically based science (rigorous, proven methodologies, and peer reviewed results), emphasizing that whether science is conducted by a private company, a university, or a government department or agency, it is all the same, requiring that sound methodologies be followed. Scientific research protocols and methodologies have been developed, reviewed and refined, through the application of each scientific method and the peer review of experimental protocols and results, creating global standards on research methods. Empirical science is empirical science--it is not an ice cream flavor; one cannot pick and choose which aspect of the scientific method to support and which to reject. The application of empirical science is consistent, whether applied to climate change, vaccines, or GM crops and foods.

Upcoming Publications

- *The Importance of Communicating Empirically Based Science for Society*--See above for info.
- *Food Biofortification--Reaping the Benefits of Science to Overcome Hidden Hunger*(October release)
- *Ground and Aerial Robots for Agricultural Production: Opportunities and Challenges*(November release)

Animal Agriculture and Environmental News

Biological Hacks with Pigs, Chickens, and More: These farmers are incorporating sheep, goats, pigs, and chickens in their farms, creating a “biological hack” that provides [agronomic, economic, and environmental advantages](#).

COVID-19 Hits Meat Workers: A poultry processing plant in California [experienced an outbreak](#) that led to nearly 400 coronavirus infections and accounted for eight deaths.

Setting Goals: The Dairy Farmers of America cooperative plans to [reduce direct and value chain](#) GHG emissions.

Bizarre Bacteria: UC-Davis researchers are making [progress in the fight against a tick-borne bacterium](#) responsible for a devastating cattle disease.

New Sensor System: Australian researchers recently evaluated an automated sensor system for [panting detection in feedlot cattle](#).

Gene Editing: FFAR awarded a research grant to a



Elon Musk’s Neuralink group placed [a coin-sized computer chip in a pig’s brain](#) to demonstrate brain-to-machine interface and to study dementia, spinal injuries, and more.

company to examine how [genetic alterations](#) can improve heat resistance in cattle.

In a livestock bidding war, a ram sold for a record [350,000 guineas](#) in Scotland.

Food Science and Safety News

A Food Oasis (video): A group of teens joined with professional athletes in Chicago to transform a liquor store into a [fresh food market in an inner-city food desert](#)

Volunteers for Food: According to the hunger relief organization Feeding America, two-thirds of food banks are [currently in need of volunteers](#).

Food Safety: Texas A&M specialists are providing [tips to help reduce the possibility of foodborne illness](#) in light of recent *salmonella* scares.

Restaurants Focus on Food Safety: The COVID-19 [pandemic has raised consumer awareness of health and safety](#), especially in public places.

Mouse Research Looks at Gut Microbiome: This Cornell research tracks metabolites—[nutrients formed in or necessary for metabolism](#)—by identifying how they interact with specific gut microbes.

String Cheese Science: This article explains what makes [string cheese stringy](#).



Research shows that the pandemic caused more people in the United States to cook at home--and to do so with [an eye toward avoiding food waste](#). Check out the CAST Issue Paper [Food Loss and Waste](#)

Plant Agriculture and Environmental News

Grain Trade: Chinese state-owned firms [bought at least eight bulk shipments of U.S. soybeans](#) on September 1, and many are watching the factors affecting [soaring corn prices in China](#).

"Natural" Plastics: Ohio State University researchers are developing a method to make a key component of plastics, using [bacteria to create ethylene in a tech-friendly way](#).

Taking the Bloom Off: Across the Midwest, [clearing algal blooms](#) from nutrient runoff has accrued a high price tag.

Plant-based Energy: Dartmouth researchers published an analysis on how current and future [uses of plant-based energy could be a key](#) solution to climate change.

Insights about Gypsum: This study aims to establish criteria for when to use gypsum instead of lime in no-till soils and to examine [how gypsum might help root growth](#).

Ratooning Rice: A recent study found that climate change could [increase rice yields](#).



Plant research at [Cornell University](#) and the [University of Arkansas](#) is helping blueberry farmers, but according to this report, the [wild blueberry industry](#) is in trouble.

International News

Nitrogen in the Netherlands: The agriculture minister wanted to [lower the protein fed](#) to dairy cattle in hopes of

lowering nitrogen emissions.

Meat Deal: Taiwan's government yielded on a long-standing obstacle to a free-trade [agreement with the United States regarding pork and beef](#).

Coral Bleaching: Coral bleaching was detected in a usually healthy reef off Australia's northwestern coast. Because of the pandemic, [scientists turned to tourism operators](#) to help study the problem.

Porcine Green Deal: Pig producers in Europe will soon [face the EU's "Green Deal."](#) This hog expert gives his insights about how this might affect swine production.

"Rewilding" Needy Animals: These wildlife enthusiasts are trying to create [wildlife sanctuaries across Chile and Argentina](#) for jaguars and other animals with special problems--most of them come from zoos.

Trade Time? (opinion): This British agriculturalist believes there is a good opportunity to make a [free-trade agreement between the United Kingdom and the United States](#).



Three students from the Indian Ocean island of Mauritius explain how they are fighting the [disastrous oil spill](#) from a wrecked Japanese ship—[several sailors have died](#) in the cleanup, and the environment there is threatened.

A ship carrying 43 crew and nearly 6,000 cattle from New Zealand to China [capsized in stormy weather](#) in the East China Sea.

General Interest News

Helping School Children (video): This Cal Poly student is [helping farm workers' children](#) during the COVID-19 crisis—especially with school supplies.

Challenging Time for Food Workers: The “essential workers” picking the country's food are [facing fires, heat waves, and the pandemic](#).

New Guinea Singing Dog: Researchers used conservation biology and genomics to discover that the New Guinea singing dog, [thought to be extinct for 50 years](#) still thrives.

Broadband Support: Recent studies indicate that [states with broadband funding programs fare better](#) with the many things that broadband provides for communities.

Smaller "Big Salmon": This article speculates that climate change and competition with farmed salmon may be leading to [smaller salmon in Alaska](#).

IDEA-Trend: Researchers at NC-State [discuss how they overcame various challenges](#) brought on by the pandemic.



These 20 examples show [educators and teachers around the world](#) using hands-on lessons and the environment to create a more resilient food system. And this site provides [resources for virtual learning and integrating agriculture](#).

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- * Northeastern Weed Science Society
- * Poultry Science Association
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- * 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

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The Science Source for Food,
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