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

Although Giving Tuesday has passed, please join CAST in celebrating 50 years of empowering credible, unbiased science communication critical to the future of food, agriculture, and natural resources! A gift of any size will help the CAST Boards, staff, and volunteers be better prepared for the challenges of the next half century. You can learn about donation opportunities on the CAST website.

Nominations are open for the 2022 Borlaug CAST Communication Award, an honor that recognizes professionals actively working in the agricultural, environmental, or food sectors who are promoting agricultural science in the public policy arena.

The USDA’s Agricultural Outlook Forum will be a virtual event on February 24-25, 2022—“New Paths to Sustainability and Productivity Growth.”

CAST Society Members are an important component in the

December 3, 2021

Agriculture's Vibrancy

According to the USDA’s Economic Research Service, agriculture, food, and related industries provide jobs for 10.3% of the American population. This vibrancy is sustained by hard work, science, technology, and innovation.

The following links focus on some of the many university advances in ag-related science and technology: 1) A researcher from Kansas State University says autonomous pest control could stop localized infestation in crop fields before it spreads. 2) A recent CAST Issue Paper looks at Ground and Aerial Robots for Agricultural Production: Opportunities and Challenges. 3) A joint North Carolina State and USDA/ARS Ag Tech Hackathon promoted agricultural sustainability using computer vision, machine learning, and robotics. 4) An expert from The Ohio State University is leading efforts at the university to look at how technology is reshaping agriculture—with a special look at farm machinery.

News and Views

Government Statements: 1) The FDA announced proposed changes regarding water testing requirements and produce growers. 2) An administration spokesperson says port traffic is improving. 3) NIFA highlighted several agricultural research projects focused on addressing antimicrobial resistance.

USDA: The department 1) announced updates to crop insurance and 2) is accepting applications for loans and grants to help people in rural areas get access to high-speed Internet.

Avoiding a Shutdown: Congress averted a government shutdown a day before the funding deadline.

Risk Management: A University of Missouri expert says the agriculture industry needs the right information to better manage risk during the next stage of the pandemic.

Origin of COVID-19 Beliefs: Alexa Lamm (2020 BCCA) and colleagues published results that indicate select COVID-19 information sources used and social media connections
efforts to fulfill the organization's mission. Society members include those representing medicine, plants, food, animals, and other types of science and agriculture.

CAST College Corner

University of Kentucky researchers looked at a multidisciplinary approach for pediatric diabetes management.

Tuskegee University’s Carver Integrative Sustainability Center partnered with other 1890s Land Grant Universities and community-based organizations to help Black Belt communities.

Texas A&M recently hosted the inaugural "Inclusive Excellence Summit" to strengthen and highlight diversity, equity, inclusion, and justice.

CAST Social Media

Visit our website

CAST welcomes ideas for future publications and projects.

CAST Updates

CAST "GMO Free" Commentary and Webinar

The CAST Commentary Gains Foregone by Going GMO Free: Potential Impacts on Consumers, the Environment, and Agricultural Producers looks at the benefits of GMOs and the potential cost to society if the technology were removed from the marketplace. It examines the benefits of GMOs to consumers, the environment, and crop and livestock producers, and it discusses realized and potential costs of restricting GMO applications.

The full publication, Ag quickCAST, and webinar video are available here Check out the International Section below for related stories.

New Board Updates

During the next few weeks, CAST will be welcoming newcomers onto the CAST Board of Representatives. This week we are featuring Stephanie Masiello Schuette and Anthony Witcher:

- **Stephanie Masiello Schuette** is the incoming rep for the Innovation Center for US Dairy and is replacing Rajesh Chintala. She joined the Plant Agriculture and Environmental Issues work group.
Tribute to Jerry Palen, Famed Artist and Friend of Agriculture

Award-winning artist Jerry Palen passed away recently, but he left behind quite a legacy. His long-running STAMPEDE cartoon series lives on as well as his many other creative achievements—including the impressive sculpture he created for the Borlaug CAST Communication Award.

Former CAST EVP John Bonner explained, “Agriculture and CAST lost a true friend and supporter in the passing of Jerry Palen. He focused his considerable creative talent on sculpting the Borlaug CAST Communication Award bronze. He understood the unique value of CAST in relating that we live in ‘A world supported by plants and animals.’ I am honored to have known and worked with Jerry for over 30 years—an amazing artist and a person who will certainly be missed.”

Animal Agriculture and Environmental News

Poultry Study: A study on probiotic intervention to prevent Salmonella infection in hatchlings is being held thanks to a USDA SARE grant.

Dairy: Several dairy organizations support a U.S. Senate proposal that would direct the USDA to open the hearing process into the Federal Milk Marketing Order system.

Environmental Enrichment: A recent study shows how environmental enrichment can promote species-specific behaviors in pigs.

Cattle and Vaccines: A Kansas State University veterinarian gives best practices for vaccine management.


ARS researchers found that some natural products’ medicinal properties reduced virus levels and improved gut health in honey bees.

Turkey Smarts: Turkeys get the “dumb bird” label from many, but these scientists say they have skills to adapt, survive, and “get out of the rain.”

Food Science and Safety News

Food Supply and the Pandemic: Food supply chain lessons learned from the pandemic in the protein sector are analyzed in a new review in Applied Animal Science.
Food Insecurity Report: This USDA study presents the overall findings of the Food Insecurity Nutrition Incentives final report.

Youth and Food Systems: New research says many young people aged 18-24 think the global food system is in crisis—with two-thirds believing that the current food system is hurting the planet.

Protein Quality: A new study from two universities leverages the DIAAS system to understand protein quality in beef and pork burgers and plant-based burgers.

Taxing Sweetness: This article looks at the financial effects of taxing sugar-sweetened beverages and it calls for research into the nutritional impacts of such laws.

Something Fishy: Fish farming by-products have the potential to contribute to sectors such as food ingredients, diet supplements, animal feed, and food packaging, according to a new study.

Columbia University engineers invented software-controlled robotic lasers that "cook food" with unparalleled precision, retaining more moisture, and creating an entirely new, customized way to cook a tasty meal." These videos and photos show lasers and 3D-printing in action.

Plant Agriculture and Environmental News

Tree Behavior: This article says trees in urban areas have started turning green earlier than their rural counterparts due to cities being hotter and having more lights. This could have implications for humans, pollinators, and wildlife.

Living Up to Expectations? This article looks at cover crops and the hope they can benefit the climate.

A Look at History, Climate, and Maybe the Future (video): The twisting bristlecone pines on rocky slopes in California are the longest-lived individual trees on the planet.

Fighting Citrus Greening: University of Florida research shows that citrus trees grown under individual protective covers can be protected from a toxic bacterium.

Root Causes: Roots build soil carbon and support other life forms—and they are possibly important for carbon storage.

Prairie Power: The University of Arkansas will inventory plants and collect seeds from an on-campus remnant prairie that is a field site and seed source for students.

ARS scientists have developed a way to make a better jet biofuel from soybean oil. Fatty acids from soybean oil can be turned into many products normally made from petroleum, including ink and paints.

International News

GM Crop in Africa: Nigeria is urging the rest of Africa to follow its lead and approve genetically modified cowpea to help ensure food and nutrition security.

GM Wheat Approved: The Brazilian government gave the green light for the sale of flour produced from a drought-tolerant transgenic wheat developed in Argentina.

GM Corn "in the Hopper": China plans an overhaul of its seed regulations setting out a clear path for approval of GM crops—with a focus on corn.
General Interest News

Which Birds Are Bullies at the Feeder? Ornithologists decoded the pecking order and created a continent-wide power ranking of almost 200 species—from the formidable wild turkey at the top to the brown creeper at the bottom.

Grit and Gratitude (videos): These stories of survival and compassion celebrate agriculture and the people who make it special—from wildfire survivor to a mail carrier life saver.

Ag Education and Jobs: North Carolina A&T State University is exploring post-high school educational and work opportunities for underserved youth.

Jelly Ice Cubes: Researchers from UC Davis have developed an ice cube that doesn’t melt or grow mold. It’s also compostable and prevents cross-contamination.

Tobacco Research: North Carolina tobacco growers voted to continue a self-assessment that raises funds to support tobacco-related research and extension efforts at North Carolina State University.

Big Dry: California’s prolonged drought is having serious impacts on its agricultural industry, the nation’s largest.

The “Watershed Game” app developed by Iowa State University is reaching a wide audience. As Dr. Nancy Grudens-Schuck said, “It is a dynamic, engaging way to introduce the practices of science into agriculture, science technology, engineering, and mathematics learning—based on real science from real watersheds.”

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* American Association of Avian Pathologists
* Crop Science Society of America
* Innovation Center for U.S. Dairy
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