CAST Report Provides Info about Biotech and Trade--P. 2
Animal Agriculture News
Food Science and Safety News
Plant and Environment News
International News
General Interest News

Ag on a Big Scale
Agriculture is a BIG thing--this photographer captures it in all its scope, grandeur, and dizzying scale.

CAST 2016 May to Dec. Summary of Activities
Photos and short descriptions highlight the key facets of CAST's efforts in the second half of 2016.

Borlaug Summer Institute Applications
The U.S. Borlaug Summer Institute on Global Food Security is an annual two-week learning program for graduate students attending U.S. institutions--application deadline Feb. 17, 2017.

Leading Fertilizer Group on Board

December 16, 2016

Biotech Approvals and Trade
CAST paper provides important information

During a panel discussion about the material in CAST's new report, one U.S. government official summed it up this way: "The paper is very helpful and will continue to be so."

This special literature review and report examines the impacts of asynchronous approvals and looks at possible solutions. Through presentations, social media, and its website, CAST has provided the information for a wide audience. Several ag media groups featured the publication, and many people have accessed it through Facebook, Twitter, and other online sources.

**Scroll down to page two for more information, photos, and links.

News and Views

**Mixed Reviews--Some Heated--for GIPSA Rulings: The USDA finalized a rule that it says will protect pork and poultry producers, but industry groups are crying foul. The Grain Inspection, Packers and Stockyards Administration released its "Fair Farmer Practices" regulations--many have strong opinions about the proposals.
The Fertilizer Institute (TFI) has rejoined CAST, and the respected organization will have a representative on the CAST Board. More details about this and other CAST membership news in the January 6 edition of Friday Notes.

**Fracking Report Gets Fractured Responses:** A report about hydraulic fracturing considers the positives and negatives of fracking. Proponents and opponents of the technique disagree about the findings.

**EPA Pick Also Illicits Mixed Reactions:** The President-elect's pick of Scott Pruitt to head up the EPA is welcome news for some farmers, ranchers, and ag organizations. Others, especially environmental groups, take issue with the choice.

**Why I Farm:** This young Iowa State alum has been living on the road, sharing the stories of America's farmers through blogs and photography as part of Beck's Why I Farm Movement.

**How to Promote Ag?** This writer says most farmers are intelligent entrepreneurs and eager risk-takers—and though he admires them, he does not promote the “thank a farmer rhetoric” in the ag press.

**Oregon:** A local newspaper published a story highlighting the importance of agriculture in the region and the economic benefits it provides.

**South Dakota:** A state senator introduced a bill to establish an agricultural innovation fund to support research and development projects.

**New Mexico:** The state's governor signed an executive order to strengthen the state's ag industry by attracting new businesses and investments.

**Influential CAST Paper Examines Trade and Biotech**

Rollouts in D.C. focused on impacts of asynchronous approvals.
The Council for Agricultural Science and Technology rolled out its latest paper—*The Impact of Asynchronous Approvals for Biotech Crops on Agricultural Sustainability, Trade, and Innovation*—on December 8, with a presentation for Senate staffers and a Lunch 'N Learn for House staffers. The literature review and report was also presented at an afternoon session cohosted by the U.S. Biotech Crops Alliance at the American Farm Bureau Federation Building.

Experts from government, academia, and agribusiness seemed to agree with an insightful statement from one of the panel members. He pointed out that all countries, all producers, and all consumers lose under the current fractured system of asynchronous approvals. CAST's literature review and report looks at ways to solve the problems.

The authors focus on the economic effects in countries that are major global commodity exporters and importers, and they show that asynchrony in the global approval of new biotech crops and the resultant risk of low-level presence (LLP) puts large volumes of trade worth billions of dollars at risk. As Task Force Chair Dr. Kalaitzandonakes said, "How the world's regulatory systems operate in the area of biotech crops is critically important to producers and consumers."

The report offers several potential solutions and provides research about approaches that might ease the negative impacts. The paper concludes, "As long as the current situation persists, agricultural biotechnology will be prevented from delivering the full range of promised benefits of improved standards of living and food security."

Click here to download the report, the Ag quickCAST, and the Chinese version of the paper.
Animal Agriculture and Environmental News

Beefy Optimism (video): A spokesperson for Farm Factor gives an update on U.S. beef--its quality and why it is in demand around the world.

Chicken Venture Hatches Debate: A proposal that would jump-start the chicken business in Nebraska has some residents concerned about potential environmental impacts--but others hail the venture.

Meaty Concerns (opinion): Dan Murphy gives his insights about the day coming when consumers will be able to print their own 3-D meat products right in their own kitchens.

Finding a Veterinarian (audio available): Finding a qualified local vet can be a time-consuming process, but a new online resource--provided by the National Pork Board and Global Vet Link--is designed to help.

Baby Pig Digs: Pigs raised in group housing during lactation weigh less than those in conventional farrowing pens, German researchers have found. In addition, mortality is higher.

Potential Bacteria Problem: Some workers at industrial hog production facilities might be carrying livestock-associated, antibiotic-resistant bacteria in their noses and in skin infections, according to this research.

Hard to Find, Costly, and Trendy: A small but noticeable movement of cult steaks is sweeping the globe, starring farmers and artisanal producers in places from Japan to California.

Calling Little Bo-Peep: This director from the American Sheep Industry says the United States needs to produce more lambs.

AnimalAgCast about Horses (podcast available): This government official gives an overview of the Wild Horse and Burro Program that is dealing with the welfare of the four-legged animals.

Food Science and Safety News

What's in Your Stocking? (video): According to this clip, these delicious food products are perfect to share this holiday season--and they're made in America.

What Not to Eat (video): 2016 was filled with food recalls--here are the top nine.

But My Pizza Joint Isn't Listed! The 50 best college-town pizzerias in the country--and yes, these choices will foster heated debate.
**Make Health Food--But Gimmee Chips:** This food and beverage giant says it wants to make more "good for you" snacks, but much of its revenue growth comes from standbys such as Cheetos.

**Chocolate Glut?** Cocoa prices are spiraling lower, making chocolate cheaper in time for the holidays--and overall, people are eating less chocolate, according to this article.

**Fat Phobia (opinion):** When it comes to dietary fat, what matters most is the type of fat you eat, according to this article. New research suggests certain types of fat are beneficial.

**What's the Fuss about Choline? (opinion):** Most Americans are not getting enough choline, according to a recent study published in the Journal of the American College of Nutrition.

**Shedding Light on Milk Taste:** Scientists say that LED lighting installed in retail display cases can improve the taste of milk packed in translucent, high-density, polyethylene containers--and consumers seem to like it.

**Teaming Up for School Nutrition:** The USDA Food and Nutrition Service and the Institute of Child Nutrition partnered to create the Team Up for School Nutrition Success initiative.

---

**Plant Agriculture and Environmental News**

**Modern Genetics and Our Food (video):** This popular TED talk features a specialist who describes her decade-long quest to isolate a gene that allows rice to survive prolonged flooding.

**Beautiful and Deadly:** Female orchid mantises are dazzlingly beautiful--and they have evolved to get large enough to successfully hunt prey.

**Stressed Weeds and Herbicide Failure:** A University of Florida weed specialist looks at why herbicides might fail during droughts. "Ironically, we need healthy weeds for herbicides to be effective."

**Law of the Minimum:** This Georgia farmer shatters corn and soybean yield records--and he claims to be a disciple of the "Law of the Minimum: One weak nutrient to rule them all."

**Gift-giving Plants:** This article suggests these as the best plants to give as holiday gifts.

**Plants--Precisely:** Precision gene editing in plants is a way for scientists to increase nutritional value and decrease susceptibility to diseases, according to this specialist from the American Seed Trade Association.

**A Weed on Fire:** The weed downy brome has invaded millions of acres of arid grasslands in the western United States, and this research shows it has developed fire-survival traits.

**Plant Memories and Junk DNA:** This article explains current scientific exploration into how plants know when to flower.

**Think Pink:** A strain of pineapple genetically engineered to be pink instead of yellow received the go-ahead from the U.S. Food and Drug Administration.
International News

A Delicacy out of Fermented Cabbage and Spices (video): For South Korea, kimchi is a symbol of national pride, and Kim Myung-Sung makes some of the best fermented vegetables around.

Tomatoes in the Desert (video): Sundrop Farms in South Australia is growing 15,000 tons of tomatoes using seawater and thousands of mirrors.

Milkshakes and Geologists: A dairy farm in New Zealand with an active fault line running through it has become a mecca for geologists seeking to unlock secrets deep underground.

First Animal to Walk on Land Was Wearing a Kilt? A twisted tale of animal fossils brings our ancestry back to what is now the land of bagpipes, kilts, and haggis.

Puttin’ ‘Em out to Pasture (opinion): Irish scientists say there is evidence that pasture-fed cows do produce better products.

Associative Learning: This Australian research says that plants can learn about their environment by making links between events, an ability thought to be exclusive to animals.

It's Terrible--Give Me More: Scandinavian-Americans still seem to treasure the "Viking" dish made from lutefisk even though it is famous for being smelly and, for many, terrible to eat.

General Interest News

Campus Hunger (video): The number of food pantries on college campuses has quadrupled, and data suggests that hunger is more common among college students than in the U.S. population as a whole.
Drone Deliveries in Test Stage:  A drone from the Prime Air fleet made a
13-minute flight in England to drop off a package—the first in a trial to
deliver packages to a number of customers.

Droning On about Drones (related to above):  For more links about drones and a look back at old-fashioned "drone deliveries" from the Watkins' man, click here.

Animal Therapy--for Humans:  A growing body of evidence reinforces the health benefits of animals for humans—including the help they can give to those suffering from mental illness.

Delta Dawgs Key to Research Efforts:  This feature profiles Mississippi State University graduate students working at the Delta Research and Extension Center.

Lead and Water Don't Mix:  According to this report, four million Americans could be drinking toxic water and not know it.

Renewable Fuels and Research (opinion):  According to this article, the Renewable Fuel Standard keeps the research community busy looking into new plant-based sources of energy.

Pipeline Leak:  The Belle Fourche pipeline recently leaked roughly 180,000 gallons of crude into a creek in far western North Dakota. The incident occurred as hundreds protest the Dakota Access Pipeline.

Ethanol Spills and the Environment (opinion):  As production and transportation of ethanol has risen dramatically in the region over the past three decades, so have ethanol spills.

Growing Algae:  Scientists say global warming is altering the Arctic food chain—with unforeseeable results.

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.

If you have a good idea for a CAST publication, contact us by clicking HERE for the "Proposal Format" and Background Information Form.

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). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits. Contact Colleen Hamilton at 515-292-2125, ext. 224 or chamilton@cast-science.org, or CLICK HERE for CAST membership information.

Societies, Companies, and Nonprofit Organizations Serving on the CAST Board of Representatives

* 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 Society for Nutrition Nutritional Sciences Council
* American Society of Agricultural and Biological Engineers
* American Society of Agronomy
* American Society of Animal Science
CAST assembles, interprets, and communicates credible, science-based information regionally, nationally, and internationally to legislators, regulators, policymakers, the media, the private sector, and the public.

Members of CAST’s Education Program

* Cal Poly
* Cornell University
* Iowa State University
* Kansas State University
* Mississippi State University
* North Carolina State University
* Texas A&M University College of Ag & Life Sciences
* The Ohio State 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 Nebraska Agricultural Research Division
* University of Nevada

Note: WinField Solutions (Land O’Lakes) provides sponsorship for the distribution of Friday Notes to the National Association of Agricultural Educators.

** With assistance from Carol Gostele (Managing Scientific Editor), Hannah Pagel (Student Administrative Assistant), and Mikayla Dolch (Student Administrative Assistant)