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

Events in D.C. to Roll Out Gene Pools Publication--P. 2
Animal Agriculture News
Food Science and Safety News
Plant and Environment News
International News
General Interest News

Forest Palette

The U.S. Forest Service has a new mobile app to help us take in the beauty of the fall colors in our national forests.

BCCA Event

CAST and CropLife Foundation invite you to honor Dr. Frank Mitloehner, the 2019 Borlaug CAST Communication Award winner, on the occasion of the 2019 Borlaug Dialogue hosted by the World Food Prize Foundation--October 16 in Des Moines, Iowa.

Teaching Ag

A Cal Poly graduate explains why she decided to become an agriculture teacher--

September 27, 2019

Cooperation and Innovation

Using Ideas, Science, and Common Sense

The agriculture community shares the frustrations and opportunities that arise with global challenges ranging from water quality to nutritional needs to climate change.

Nonprofit organizations, universities, and companies are developing programs and projects to work on these issues. The following examples are just a few of the many opportunities for positive, innovative minds to gather and face these challenges.

The World Food Prize (WFP) offers many venues for the "meeting of creative minds," including the Borlaug Dialogue. This year during WFP week, Corteva Agriscience plans a sideline gathering of company executives to discuss ways to address climate change. CAST also contributes to the WFP offerings with its Borlaug CAST Communication Award event--a session that always raises important agricultural topics.

Throughout the year, universities provide settings for sharing ideas and developing programs. The University of Nevada-Reno recently held the 2019 Global Climate Change Summit to discuss how businesses and organizations are responding to climate change. A recent event in New York City also tackled climate change and many other issues. The "Future of Food Summit"--sponsored by IFIC and the Meredith Corporation--provided sessions about technology, innovation, and agricultural practices. CAST's Communications and Social Media Specialist Kimberly Nelson attended the meeting in the Big Apple, and her blog post is here. She pointed out that this conference supported collaboration to solve challenges and advance food production.

The gatherings listed above and the many more occurring in the agricultural community highlight the need for such cooperation. Plants, animals, the environment--all of us depend on one another.

News and Views
the challenges and the rewards.

Showcasing Agriculture
The University of Missouri’s South Farm Showcase on September 28 offers families an opportunity to see the uniqueness of what a quality agriculture, food, and natural resources program has to offer.

Campus Research
UC-Davis is investing $4 million over three years to launch four new research centers that align campus strengths with unique opportunities for global impact.

Digital Environment
The ASA, CSSA, SSSA International Annual Meeting in San Antonio, Texas, Nov. 10-13 will focus on “Embracing the Digital Environment.”

Ag Education Scholarships
The College of Agriculture and Life Sciences at Iowa State University has awarded nearly $3.5 million in scholarships to students for the 2019-20 academic year.

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

CAST Social Media

USMCA Status: While politicians assess the status of the USMCA trade deal in Congress, many agricultural sectors encourage ratification, and some point out that even the medical field could benefit from the deal.

Climate Reports: According to a UN panel of scientists, climate change is devastating our seas and frozen regions as never before. Even the unusual term “ocean heat waves” entered the discussion.

U.S.-Japan Agreement: U.S. Secretary of Agriculture Sonny Perdue issued this statement about the benefits resulting from the signing of the new United States-Japan Trade Agreement.

Crisis for Renewables: At last count, 18 ethanol plants and nine biodiesel facilities have shut down in recent months. Leaders in the renewable fuels industry are asking the administration to take action.

News from the Far Side of the Barn

Robots Go Mobile (video): Atlas, the bipedal robot, does a gymnastics routine. The company is also about to let its robotic dog hit the streets.

Voice from Above (video): A drone operator in Australia alerts a surfer about a circling shark.

Cows on a Beer Run (video): The Wisconsin brewery famous for their “Spotted Cow” farmhouse ale got a late-night visit from the beer’s namesake—a group of spotted cows.
Livestock and poultry products are keys to the world supply of protein, but genetic diversity of livestock is fading. The number of breeds has declined as farming practices have focused on a small number of high-producing breeds to meet low-cost market demands. In fact, up to 25% of global livestock breeds are either at risk of being lost or have already been lost. In the face of the mounting depletion in genetic diversity among livestock species, there is an urgent need to develop and maintain an intensive program of sampling and evaluation of the existing gene pools. This paper addresses several important challenges regarding the effective protection of remaining livestock and poultry genetic diversity.

CAST will provide three options to attend informational seminars.
Click here for sign-up details

10:00 - 11:00 a.m.
328A Russell Senate Office Building

Noon - 1:00 p.m. (Lunch Provided)
1300 Longworth House Office Building

2:30 - 3:30 p.m.
USDA 107-A Whitten Building

A narrated PowerPoint of the presentation will be available post event on the CAST website and social media.
Nurturing the Young (video):  These *sea otters adopt orphaned pups* and raise them to be wild.

Considering Careers in Poultry Production:
This blogger encourages young people to consider robotics, engineering, and other skills to go along with traditional *backgrounds needed for modern poultry production*.

Potential for Beef Exports?  China consumes more beef than any other country in the world, but per capita it ranks low. Some see a *market ripe for growth*, but trade disputes are hindering the opportunities.

Pork Production:  Eyes are focused on the African swine fever’s spread throughout Asia, and many wonder *what this means for U.S. pork producers*.

Changes in the Beef Industry:  These Kansas State experts look at *notable changes in the beef industry* during the past two decades regarding the changes in retail and export demand. The *full report is here*.

Rising from the Ashes:  A multi-million-dollar facility went up in flames in less than two hours, and thousands of pigs were dead. This farm family *worked through the despair to rebuild*.

Fish Farming Debate:  Aquaculture advocates say farming fish is the best way to keep up with the *rising demand for seafood*, but opponents think such production could threaten wild fish stocks.

Bye, Bye, Birdie (video):  According to this report, *North America has lost nearly 3 billion birds* in 50 years.

Horse Sense:  Baxter Black writes about those *folks who are good with horses*.

---

**Food Science and Safety News**

WGS and Food Safety:  This article describes how researchers and public health officials use *whole genome sequencing (WGS)* for genetic typing of bacteria, including pathogens relevant to food safety.

The Milk of Human (and Cow) Kindness:  Prehistoric evidence shows that some *infants received milk from ceramic "baby bottles"*—with indications that domesticated animals were important as a milk source.

Positive about Meat:  Sales continue to grow for plant-based protein, but Elanco CEO Jeff Simmons (*2013 BCCA recipient*) says the agriculture industry should not be concerned. *Meat consumption is growing*.

Beef and Emissions:  Frank Mitloehner (*2019 BCCA recipient*) and a colleague explain why "four pounds of beef does NOT equal the emissions of a transatlantic flight."

The statistics from 2017 indicate that food expenses come in third for most Americans. And this USDA report provides a look at current "food prices and spending."
Communicating about Food and Agriculture (related to above): Along Simmons and Mitloehner, eight other respected experts have been named BCCA recipients. The winners of this prestigious honor have consistently communicated clear, thoughtful ideas to the public and policymakers.

**Beef Trends:** This meat scientist says millennial demand for taste and visual appeal is changing how beef is cut and merchandised.

**Another Entry in the Protein Smorgasbord:** The giant food company Nestlé has joined the plant-based meat trend with the Awesome Burger.

---

**Plant Agriculture and Environmental News**

**Life Cycles in the Treetops (video):** This inspiring scientist helps us understand canopy-dwelling plants, insects, and microorganisms—and she somehow involves National Geographic and a tree-top Barbie doll.

**Cotton Production and Tech:** Many farmers are using technology to grow more cotton sustainably.

**Organic Farming Growth:** Organic commodity farmers will harvest a record number of acres across the United States this year despite the weather and trade challenges plaguing agriculture in 2019.

**Rice Yields and Quality:** University of Arkansas scientists are investigating the effects of high nighttime air temperatures on rice quality.

**A Big "Apple Release" Has Nothing to Do with iPhones:** Washington orchard producers hope the Cosmic Crisp apple will boost production and sales this year.

**Keeping Those Worms Out of Your Apples:** University of Kentucky researchers are working to develop ways to quickly and noninvasively identify moth-infected apples.

**Cleaner Water:** A USDA expert joined an Iowa State professor to find ways to remove nitrogen from tile water--saturated buffers are the key.

---

**International News**
**Furniture Farmers (video):** These farmers in England are working on an unusual alternative to the process of cutting down trees to make furniture.

**From Purdue to Tajikistan:** Purdue University experts are analyzing markets and advising with the production of dried apricots in southern Tajikistan.

**Potatoes Gone Wild:** Using genetic material from wild potatoes grown in the Andes, scientists can improve disease resistance and other traits.

**Edible Forest:** Himalayan villagers use a traditional practice that can slow land clearing and feed people—growing and collecting food from the forests.

**Valuable and Challenging:** Ginseng is the most valuable field crop grown in Ontario, but the production process is complicated.

**Does My Breath Smell Like Seaweed?** A puffy pink seaweed in Australia might help reduce the amount of methane cows burp out.

**Myanmar Dairy Program:** International efforts are helping Myanmar build its dairy industry from scratch.

---

## General Interest News

**Farm Safety and Children (video):** The National Children’s Center estimates one child dies every three days in an agriculture-related incident. An emotional farm mother tells of her loss—and the importance of farm safety.

**Precautions, Danger, and Healing (related to above):** This blog describes dramatic grain bin rescues, provides links to farm safety sources, and describes the way communities come together to heal.

**Real World in the Classroom:** When it comes to translating classroom lessons into real-world experiences, this dietetics major says Tuskegee University is fostering her love for a career addressing nutritional needs.

**Cornell University is using its aquaculture expertise to rejuvenate Long Island’s waters by spawning millions of oysters and hard clams and planting them in five coastal sanctuaries.**

**Pumpkin Spice Pumpin’ Up Dairy:** It’s that time of year, and some say the public’s pumpkin spice addiction supports dairy farmers—from cream to butter to ice cream.
Student Leaders: A Mississippi State University student was named a Kirchner Food Fellow as part of an international program that connects student leaders who are working toward long-term, global, sustainable food security solutions.

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). 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, 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
* 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
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 and knelson@cast-science.org

** With assistance from Megan Wickham (Managing Scientific Editor) and Colleen Hamilton (Membership Specialist)