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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In This Issue

Filling Plates
Without destroying the planet

The headlines are often at odds--starvation rates are down, but millions are still suffering from malnutrition; the global middle class is growing, but that means more pressures on food production; science and technology can help, but earth's soil and natural resources are in peril. Many agree that the challenges of feeding a rapidly growing population will involve innovation, conservation, and food waste control. But opinions often vary about the specifics and the plans that the ag world should implement. These five articles represent some of the current thoughts about the crucial task of food production:

***This detailed essay from the Atlantic examines opposing ideas about how to provide for all without making the planet uninhabitable.***

***AgriPulse's Sara Wyant looks at biotech and how consumers might be engaged in a positive manner as ag innovation develops.***

***This article from Harvest Public Media considers the global importance of fruits and veggies--grown organically or conventionally; consumed locally or packaged and shipped.***

***This overview explains why urban agriculture might be an important way of increasing the diversity of plants and animals in the city.***

***A UN Food and Agriculture Organization report provides suggested actions as the world faces the challenge of how to feed a growing population while resources decline.***

News and Views

Ag Day Essay Winners
The Agriculture Council of America is sponsoring Ag Day (March 20), and they have already announced this year's essay contest winners--a student from Oklahoma wrote the winning essay, and a student from Indiana produced the top video.

February 16, 2018

Valentine's Day sometimes brings out painful puns with agricultural references--but even NFL teams use corny lines to celebrate.
Send 'Em In
Click here to submit an idea for a CAST publication.

Food Safety Summit
The 20th Annual Food Safety Summit (May 7-10 in Rosemont, Illinois) will address the importance of food safety throughout the supply chain and how each community that makes up the ecosystem is connected.

On-farm Research
Learn about more than 80 research projects being conducted by Nebraska farmers in partnership with the University of Nebraska-Lincoln during these upcoming February meetings.

Animal Ag Conference
Dr. Alison Van Eenennaam will speak at the "For the Future of Animal Ag" conference May 3-4 in Arlington, Virginia.

CAST Social Media
Click here for links to CAST sites: Twitter, Facebook, LinkedIn, Pinterest, videos, and blogs.

The Fair Agricultural Reporting Method: This bipartisan legislation would exempt air emissions from animal waste being subject to certain reporting requirements.

America's Harvest Box: The Trump administration proposes a plan to reform food stamps that would replace the current debit card-based system with one that directly provides American-grown foods to households. Reactions vary—as this blog, Jayson Lusk offers economic insights, and this article covers negative responses.

Veterinary Work and Its Stresses: This large study of veterinarians was designed to examine stress and professional pressures in the veterinary profession.

Crop Insurance Cut: Crop insurance is expected to be one of the most controversial issues in the 2018 Farm Bill as President Trump proposes to slash the taxpayer-subsidized program by a third.

News from the Far Side of the Barn

Rocky Raccoon as Your Waiter? (video): This South Korean restaurant is a memorable menagerie—with parakeets, meerkats, and wallabies. Raccoons are the current featured, furry attraction.

Robo Dogs Show Teamwork and Agility (video): These robotic dogs are impressive but also a bit unnerving—like they might become dominant enough to have you fetch their slippers.

Downhill Run--in a Boat (video): Snow kayaking is not an Olympic sport, but this frantic view of the run might convert some folks.

CAST Connections
University News and Recent CAST Blogs
CAST benefits from its relationships with fourteen excellent agriculture universities. *Friday Notes* editions regularly feature articles from these (and other) schools. The items range from announcements to research to special interest stories, and they appear in various sections of the newsletter. Here are some example links:

The Engineering Entrepreneurship Program at Texas A&M University is [hosting a global design challenge](link) that addresses some of the world's most pressing problems.

Sediment is clogging historic Lake Treman in Ithaca, and without intervention, the area will become a marsh by 2050. [Cornell students are finding ways to restore the environment](link).

UC-Davis scientists [developed a system to efficiently derive embryonic stem cells](link) from species like cattle. This could be important for genetic testing, genome engineering, and studying human disease.

The University of Kentucky was represented by 16 [undergraduate students and their 14 research projects](link) at the 17th annual Posters-at-the-Capitol event in Frankfort, Kentucky.

This new CAST blog, *Unscrambling Recent Egg Research*, features [articles about new studies and industry updates](link).

**Friday Notes News Categories**


**Animal Agriculture and Environmental News**

**Equine Stem Cells:** Researchers are exploring [the use of stem cells to treat skin wounds in horses](link) with techniques that may translate to the treatment of human patients.

**Got a Fever, Not the Flu (clarification):** Last week we reported that researchers licensed a [new vaccine to fight classical swine fever](link)--but referring to it as swine flu was misleading. This article clarifies the terminology and the specifics.

**Raw Milk Bill:** Opposition is building against an Iowa bill that would allow dairy operations in the state to sell [unpasteurized milk directly to consumers](link).
Pork Production on a Grand Scale:  China's first large-scale, modern pig farm will soon include 10,000 sows that will live inside two huge barns.

Disease-resistant Poultry:  Researchers have identified disease resistance in chicken DNA--resulting in possibly lower antibiotic use and higher animal welfare.

Olympic Egg Overload:  Eggs are no stranger to an athlete's diet, but these Olympians may have had chickens working overtime.

Food Science and Safety News

Alternative Meat (video):  The beef industry is watching the growing popularity of alternative proteins of plant-based and meatless burgers. But are they really a threat?

On the Same Team? (video):  This foodie thinks biotech and organic methods are really not so opposite, and he interviews Kevin Folta for some insights.

Ad Controversy (opinion):  The uproar following Stonyfield Farm's ad featuring elementary school-aged girls perpetuating GMO myths was widespread. This writer suggests how the issue could have been handled.

Food or Medicine?  Mushrooms have been used in Eastern medicine for centuries to treat everything from asthma to gout. Some say they have medicinal powers; others say more testing is needed.

Hoping to Improve Food Systems:  Cornell researchers analyzed where supermarkets in the Northeast source the foods they sell to their low-income customers.

Farmer-focused Chicken:  This company has added a farm ID code to its labels, and this could mean similar upcoming changes for the beef and pork industries.

Plant Agriculture and Environmental News
Digging for Antibiotics (video): This microbiologist thinks that instead of growing antibiotics in a petri dish, we might be able to find them in the ground.

Redwood Genome: For the first time, scientists are mapping the redwood's genome, a genetic code 12 times larger than that of a human being. David Neale of UC-Davis is the lead scientist.

How Does Your Garden Grow? As spring approaches, the Soil Science Society of America provides insights about community gardens.

Bees and Almonds: The relationships between almond growers and their beekeepers often go back years or even generations.

The Buzz on Honey Bees (related to above): Check out the CAST Commentary Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It.

International News

Entrepreneur India: This article lists several start-ups that are revolutionizing Indian agriculture with mobile apps for farmers.

Freedom Farrowing (video): Australian researchers found that sow confinement appears essential for a short period of time. Similarly, here are 11 reasons why group sow housing should be considered.

Belgium’s Pig Production Success: Belgium houses more than 6 million pigs in an area the size of Maryland.

Ethanol in Brazil: An expected increase in ethanol demand in Brazil will initially be met by fuel produced from corn. The government expects demand for ethanol to double by 2030.

Famine and Genetics: A horrible famine in Holland ended 70 years ago, but according to this study, Dutch genes still bear the scars.

South Africans Pig Out: Pork consumption in South Africa grew by more than 30% during the past ten years and is expected to grow even more during the next decade.

General Interest News
Quantum Dots (videos): According to this article, quantum dots supercharge farming, medicine, and solar innovation. This emerging category of nanoparticles has futuristic uses that include advanced lighting, indoor farming, medical advancements, and ag tech.

More Than Just the Peanut Man: George Washington Carver was known as "the peanut man" for his promotion of more than 300 uses for the legume, but his primary passion was educating southern farmers about new farming practices.

A Lasting Legacy (related to above): Carver was a student and faculty member at Iowa State University, and his legacy lives on there.

Pest Control: The USDA announced $17.5 million in emergency funding to fight the spread of the spotted lanternfly in Pennsylvania—the pest threatens vineyards, orchards, and logging industries.

Cat Credibility: A new study shows how outdoor cat owners may be judged as poor contributors to environmental sustainability.

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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Dan Gogerty (Managing Communications Editor)
Kylie Peterson (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 (Kylie)
E-mail: dgogerty@cast-science.org and kpeterson@cast-science.org

** With assistance from Carol Gostele (Managing Scientific Editor)