

Friday Notes

Council for Agricultural Science and Technology

CAST

The Science Source for Food, Agricultural, and Environmental Issues

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 the CAST organization.

In This Issue..... Click to Read

[Livestock Ag, Science, and the Environment--P. 2](#)

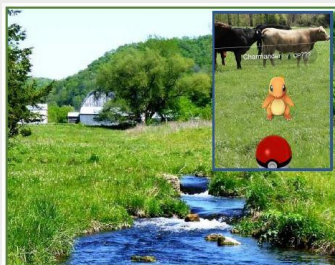
[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)



Reality Already Augmented

Farm kids have [REAL Pokemon in the Pasture](#).

Biotech Summit

The [Animal Biotech Summit](#) will be held in Bethesda, Maryland, from September 21 to 23.

Cowboy College

The popular Drover's Cowboy College in Kansas during September will focus on feedlot producers. This [educational program](#) is designed for those involved in the day-to-day care and welfare of their animals.

Some Clouds--But Many Bright Lights for Ag

This University of Nebraska article says youngsters growing up on the farm are getting mixed messages--

July 22, 2016

Science in the Spotlight

Food, environment, and health issues

The world of agriculture remains solidly linked with science, and CAST's [12-paper project--Ag Innovation](#)--looks at specific programs, policies, and techniques that will advance global food security. Recent headlines reflect the science/ag theme.

Gene Editing: Products made possible through gene editing have landed on grocery shelves, and they do not fall under the auspices of the new GMO label law. As this [bloomberg.com](#) article points out, "Regulators at the U.S. Department of Agriculture have taken [a pass on overseeing gene-edited crops](#). They say cutting DNA from a plant is not the same as adding genes from another organism."



Toxic Algae: This University of Florida professor says, "[Public science is perhaps the best tool we have](#) to show how we respond to the algae crisis. The health of our economy, our environment, and our communities is at stake." He believes universities (and science) provide the know-how to "help us heal, farm, build, learn, conserve, and communicate better."

Biotech Animals: Scientists at UC-Davis have genetically altered goat DNA in order to subsequently help human immune systems and the fight against infections such as diarrhea. But--according to this editorial--[regulations and fear are holding up](#) this and other contributions that biotechnology could make.

News and Views

****Significant Role Played by American Farmers:** President Obama signed the [Global Food Security Act](#) to help developing nations expand their agricultural capacity and get on a path to self-sufficiency. The bipartisan bill authorizes more than \$7 billion for international food

times are tough for some, but [the ag job market is bright](#).

Urban Environments

This Cornell University course looks at [ecology and sustainability in urban environments](#)--and the technological and political forces that created and continue to shape cities and the global economy.

Fall Field Day

Corn and sorghum will take center stage at the K-State Southwest Research-Extension Center's Fall Field Day Thursday, Aug. 25, in [Garden City, Kansas](#).

Learning Lab on Ranch

The ecologically diverse Cal Poly [Swanton Pacific Ranch](#) is a working center, an ecological hotspot for native plants and animals, and a learning laboratory for students.

The 5-20 Rule

This Ohio State University article [provides a quick guideline to use](#) when you look at those percentages to determine how a food might fit into your daily dietary goals.

CAST Social Media



Click here for [links to CAST sites](#):
Twitter, Facebook, Pinterest, LinkedIn, videos, and blog.

programs, ensuring that initiatives like Feed the Future continue.

****Keeping Young People in Ag:** Rural areas are taking a hit economically, and educators are [working hard to retain their young people](#)--planting the seed early in high school students that it is okay to return to your hometown after college.

****GMO Label Law Update:** Congress recently passed a bill requiring GMO labeling, but it is not as straightforward as some might think. This group has compiled "[Five Things to Know](#)" about the new law.

****Environment--Good News, Bad News:** According to the journal *Science*, the [Antarctic ozone](#) "hole" has begun to heal mainly because of smart choices and policies. On the other hand, the first half of 2016 has blown away temperature records, and many think 2016 will be the [hottest year on record globally](#).

News from the Far Side of the Barn

Boar Breaks Bad on

Beach (video): Add this to your list of reasons [not to invite a feral hog](#) to your beach party.

Best Pets?

(videos): Dutch scientists analyzed 90 mammal species for pet "suitability" and [came up with its top five animals](#). The list includes deer, wallabies, and llamas.



As mama kangaroo said to the misbehaving pouch-bound joey, "Don't make me come in there!"

Fly Like a... Frigate? (video): The frigate bird uses air currents to [fly more than 250 miles a day for months](#) at a time. They ascend to altitudes of 2,000 feet and drop back down to sea level again with moves that seem almost effortless.

Beef, Sustainability, and Science

Meeting the needs of people, the planet, and profits

Several years ago, a United Nations report called "Livestock's Long Shadow" said meat production was responsible for 18% of the world's greenhouse gas emissions (GHG). The claim has been questioned and, in many cases, debunked. A [cattlenetwork.com article explains](#) several current views:

Frank Mitloehner, an air quality specialist from the University of California-Davis, says the U.N. report was a "lopsided analysis." He conducted his own research and found food animals are minor contributors to U.S. and global GHG emissions.

Dan Thomson, a Kansas State University professor, says the beef industry is vital--and sustainability involves five pillars: health and well-being of the cattle, food safety, environmental stewardship, cost of external inputs, and income. "But in the long term, we will build a beef industry that will meet the needs of people, the planet, and profits."

CAST has published several well-respected papers about this topic. Frank Mitloehner was a member of a task force that produced the Issue Paper called [Air Issues Associated with Animal Agriculture: A North American Perspective](#). The critical analysis looks at a wide scope of issues, from greenhouse gas emissions to the logistics of manure storage facilities.

Another CAST Issue Paper, chaired by Jude Capper, is called [Animal Feed vs. Human Food: Challenges and Opportunities in Sustaining Animal Agriculture Toward 2050](#). The authors look at the largely mistaken belief that animal agriculture competes for human food supplies and wastes resources. New research published by Capper in the *Journal of Animal Science* shows that beef's [environmental footprint is shrinking](#).



Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 DNA spiral pic from genengnews.com, Pokemon inset pic from celestelaurent.com, and kangaroo pic from pinterest.com. Animal Sec. cow pic from agreport365.jpg. Food Sec. carrot pic from kidspot.com.au. Plant Sec. bee pic from stumbleupon.com. Gen. Sec. butter cow pic from agweb.com. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Animals from the Deep (video): A research submarine exploring the Marianas Trench captured cool images of several [previously unseen deep-sea creatures](#).

A Drone in the Saddle? This article considers whether or not ranchers are ready for [drones to check cattle in the pasture](#) and pick out the ones in heat or sick.

What If Slaughterhouses Had Glass Walls? Temple Grandin has advocated transparency for the meat packing industry, and [she believes conditions have improved](#).

Insights about the Pork Industry (audio): This week's USFRA interview features the [former National Pork Producers Council president](#) Doug Wolf of Wisconsin.

Eat Mor Chiken: U.S. [chicken consumption remains high](#)--with 2016 levels surpassing those from the previous two years, according to new research.

Poultry Ban Lifted: South Korea has [agreed to lift the ban it placed on U.S. poultry](#) in reaction to outbreaks of avian influenza last year and earlier this year.

Checkoff Standoff: The long-running debate over [how beef checkoff dollars are distributed and spent](#) is heating up again.

Pig Power Diet: A Mississippi State assistant professor has found that amino acids, such as lysine, appear to greatly [improve the production performance of pigs](#) when the diets are precisely administered.



Do we have a say in this drone cowboy thing?

Helping Livestock Chill Out: The current [Midwest heat wave is a concern for livestock farmers](#). They work around the clock to keep their animals safe, no matter the conditions.

Survival Skills: Some animals [adapt to their environment](#) in interesting and unusual ways--including frogs that freeze themselves.



Food Science and Safety News

Square Watermelons, White Strawberries, and Biotech Misconceptions: This article tries to dispel some [popular misconceptions](#) about genetically modified organisms.

Easing Waste by Going Ugly: Over the past few years, [so-called ugly fruit and vegetables](#) have been gaining a host of admirers. Now Walmart has officially joined the bandwagon.

Food Security Uplift: The latest International Food Security Assessment suggests [food security will improve](#) over the next 10 years for the 76 low- and middle-income countries examined by the USDA.

Healthy Eating and Diabetes: Research from the United Kingdom investigated the association between anti-inflammatory and [antioxidant dietary patterns in reducing the onset of diabetes](#).

Pour a Little Sugar on It (opinion): According to this article, [breakfast is often nothing more than disguised dessert](#)--cheesecake or chocolate chip pancakes, anyone?

It's All in the "Feel" of It: Selecting [the perfect avocado](#) is an acquired skill, and this three-step guide might help.

Cranberry Benefits: Research indicates that cranberries could protect the gut microbiota, provide antioxidant boosts, and assist anti-inflammatory functions--[benefiting the cardiovascular system and more](#).

All-star Food: Here are what some of the [baseball fans dined on](#) during the recent All-star Game--from TriTip Nachos to the Hashtag Dog.



Plant Agriculture and Environmental News

Buzz before Pollinating (video): Most [flowers hand out their pollen](#) all the time like it's nothing. Others are a bit pickier.

Attracting Pollinators (related to above): Scientists found that the way [plants arrange their flowers](#) affects the flight patterns taken by foraging bees.

Deforested (videos): For the first time in nearly 40 years the state of Iowa has seen a [net loss of forested land](#), a development that might be contributing to Iowa's problems with farm runoff and poor water quality.

Apricot Delight: After several years of hybridizations and field tests, growers [have 100% red apricots](#)--visually appealing and flavorful, according to producers.



Apparently some flowers know how to flirt.

Beneficial Bacteria: Some scientists hope that [manipulating the plant microbiome](#) could open up new ways to meet the growing demand for food.

It's a Gas: A study of [how natural gas pipeline installations affect Ohio cropland](#) productivity begins this fall thanks to a \$200,000 gift to The Ohio State University.

Raising a Stink: This USDA entomologist has found "green" alternatives to [control three native stinkbugs](#) that damage cotton, and the new methods are catching on with growers.

Plants Can Gamble: This discovery indicates that plants--not just animals--have the ability to [switch from being risk-avoiders to risk-takers](#).



International News

Africa, Ag, and Women: The President of the African Development Bank, Akin Adesina, reiterated the organization's commitment to [support the empowerment of women in agriculture](#).

Brexit and British Pig Production (opinion): This health expert looks at [how UK pig production might change](#) after voters chose to leave the European Union.

New Era in Myanmar? (opinion): This writer says that Myanmar's ruling party [must invest in agriculture](#) to tackle poverty and stimulate growth.

Pigs Grown for an Asian Market: The key philosophy of the [principle of Siam Pigs](#) is to grow hogs that are completely suitable to Southeast Asian conditions.

Vacation Hot Spots--in the Aisles? The top attraction on your next [vacation just might be the food store](#).

Cacao for Peace (opinion): The USDA Cacao for Peace project might [help conditions in Colombia](#) after a 52-year armed conflict and, at the same time, enhance the U.S.-Colombia relationship.

Fighting Climate Change and Breaking Records: Although the feat has yet to be certified by Guinness World Records, Indian officials say [volunteers planted 49.3 million tree saplings](#) on July 11.

Relying on Their Smartphones: This study claims that 80% percent of Canadian [grain farmers use a smartphone](#).



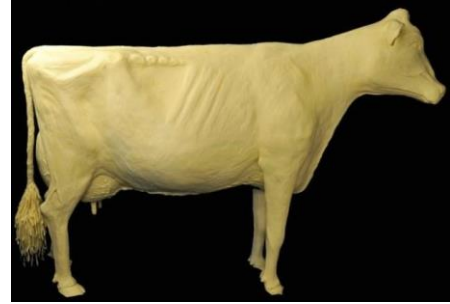
Akin Adesina receiving the [2010 Borlaug CAST Communication Award](#).



General Interest News

We'll Need Someone to Feed and Care for the Robots (video): According to this writer, the [rise of agricultural robots](#) does not necessarily mean human workers will vanish from farms anytime soon.

Where No Butter Cow Has Gone Before: At the Iowa State Fair the butter cow will be joined by [buttery versions of Captain Kirk, Spock](#), Dr. McCoy, and Uhura--to honor the 50th anniversary of *Star Trek*.



Beam me up, Scotty.

Family-owned Business Run by Inspired Farmers: The women at the [3 Sisters Family Farm](#) run both the farm operation and the store.

Hittin' the Beach: Beaches naturally filter waste from ocean water, provide people and wildlife with delicious seafood, and protect coastal communities from storms--[but they face serious pressures](#).

Where Agriculture Began: It's complicated, but a new study suggests that multiple groups of [people in the Fertile Crescent](#) started agriculture, and these groups were genetically distinct from one another.

Phytophthora Root Rot Made the List? According to Mark Parker, these are the top 10 [coolest things about being a farmer](#).

Ag and Economic Growth: According to this report, the [economic growth in Rwanda](#) during the past two decades has much to do with the development of sustainable agriculture programs.

Tech Changes Down on the Farm: This writer looks at [six ways drones are revolutionizing agriculture](#).

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."

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