

Friday Notes

Council for Agricultural Science and Technology

ICAST

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.

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[General Interest News--Farm Germs, Children, and Health](#)

Student Journalism



A program at the University of Nebraska-Lincoln gives the public a look at scientists' labs and field work. *Streaming Science* is a [student-driven science literacy program](#).

Biotech Resource in Translation

The IFIC Foundation's "Food Biotechnology: A Communicator's Guide to Improving Understanding" has been translated into Turkish--that makes [ten different languages](#).

Food Evolution in the Nation's Capital

The [film Food Evolution will screen](#) on Monday, August 7, at the National Academies of Sciences, Engineering, and Medicine's Board

July 21, 2017

Farm Labor Shortage

Farm, ranch, and food production companies have varied needs for labor, and some think a crisis is looming. As one association official said, "We can import labor, or we can import our fruits and vegetables."

The issue is complicated--including debates about immigration, skills, wages, conditions, and automation. Some think

[robots might help](#), while others are working on legislation--including an amendment to the fiscal 2018 Homeland Security Spending Bill, designed to help dairy producers and other [farmers who need year-round labor](#). A dairy farmer in Pennsylvania says technology helps, but it is hard to find workers with the necessary [skills and a work ethic](#). Some California farmers have left [crops rotting in the fields](#). Solutions are needed if Americans hope to continue getting food from fields to forks.



The complicated farm labor debate includes automation as one angle.

News and Views

USDA Positions: Ted McKinney will become the [first undersecretary for trade and foreign agricultural affairs](#); Sam Clovis will be undersecretary for research, education, and economics; Steve Censky will be deputy agriculture secretary; and Bill Northey is expected to be named undersecretary for farm and conservation programs.

Ethanol Bill: A pro-ethanol [bill is hotly debated](#) and drawing support from regional, not party, lines.

Pesticide Ruling: A U.S. appeals [court denied a petition](#) by environmental groups to force the EPA to ban the agricultural pesticide chlorpyrifos.



on Agriculture and Natural Resources in Washington, D.C.

The Future of Ag

Three of Kentucky's key agriculture leaders recently offered "[food for thought](#)" to 350 motivated high school students.

Agriculture Summit

This week, the University of Arkansas is hosting more than 100 Native Americans, Native Alaskans, and Native Hawaiians for the 4th annual [Native Youth in Food and Agriculture Leadership Summit](#).

Linking Farmers

"Farmlinks" programs have evolved to serve as catalysts for convening conversations and resource development around the [issues of land access and farm succession](#).



CAST Social Media

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

Biotech Debates: Charlie Arnot of the Center for Food Integrity looks at lessons learned from the GMO debate that can be applied to the [tremendous opportunity of gene editing](#).



County Fair Season: Kylie Peterson gets nostalgic during fair time and considers why 4-H experiences are much [more than just a four-leaf clover](#).

Farm Bill Opinions: The American Farm Bureau Federation outlines its priorities for the Farm Bill--including the [continued unification of nutrition and farm programs](#).

Adjusting to Drought: New research from Iowa State University shows how dry weather forces plants to [save energy by reducing their growth rate](#)--with the help of a family of proteins.

News from the Far Side of the Barn

Bambi Needs a Hero (video): A struggling fawn needed a group of Good Samaritans--and first on the scene was a [noble dog named Storm](#).

Putting On an Act (video): To avoid being eaten, this spider [pretends to be an ant](#), according to Cornell University researchers.

A Pooh Bear Caper: California police officers [helped free a baby bear](#) with its head stuck in a jar.



"I wasn't going to eat it. I was just going to taste it."

CAST Resources--Digging Behind the Headlines



CAST communicates credible, science-based information through its issue papers, commentaries, newsletters, videos, and social media outlets. Many of the ag/science stories that garner flashy headlines or tweeted links need further development--CAST offers research and experts to help readers dig beneath the surface. What is the science behind the comments?

These recent examples show how CAST's information supplements the stories in the media:

**** Bee Health:** The Virginia Department of Agriculture initiated the "[Voluntary Plan to Mitigate the Risk of Pesticides to Managed Pollinators](#)." The document consists mostly of recommended best practices for the use of outdoor agricultural and commercial pesticides to minimize honeybee losses, but it does not strengthen pesticide regulations. Check out the CAST Commentary, [Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It](#).

**** Biotech Crop Trade:** A Chinese delegation signed an agreement to [buy 12.53 million metric tons of U.S. soybeans](#). At the same time, several global seeds companies have [called for transparent, science-based approvals processes](#) for new crop types after China approved two more genetically modified crops for import but left four others on the waiting list. Check out the CAST Commentary, [The Impact of Asynchronous Approvals for Biotech Crops on Agricultural Sustainability, Trade, and Innovation](#).

**** Mac and Cheese Attack:** After testing 30 different cheese products, researchers found that all but one contained man-made substances that have been shown to interfere with human hormones. The highest levels were found in the cheesy [powder used to make the sauce for boxed macaroni and cheese](#). BUT--according to many, a mac-and-cheese eater would need to eat hundreds of servings to reach a toxic level. University of Florida scientist [Kevin Folta](#) says the reports are another case of [using fear over science](#).

**** Armyworm Resistance:** Entomologists at The Ohio State University, the University of Sao Paulo, and the agricultural company Syngenta showed that [armyworm resistance to Bt corn](#) started appearing in Brazil just three years after the transgenic product's introduction. Check out the CAST Issue Papers [Crop Protection Contributions toward Agricultural Productivity](#) and [Herbicide-resistant Weeds Threaten Soil Conservation Gains: Finding a Balance for Soil and Farm Sustainability](#).

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 student pic from unlcms.unl.edu, harvest labor pic from nyt.com and uky.edu, biofuels pic from futurity.org, and Winnie the Pooh pic from forums.mymvk.com. P. 2 soundbites pic from foodinsight.org. Food Sec. state fair pic from ameseatsflavors.jpg. Plant Sec. student pic from roberthartler.ISU.jpg. Inter. Sec. cat pic from loghouseplants.jpg. Gen. Sec. boy pic from newsobserver.jpg. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



Animal Agriculture and Environmental News

Bringing Livestock Back to the Prairie (audio available): Interest in beef, pork, and chicken raised on smaller farms closer to home is growing. Some Midwest farmers are [exploring ways to meet the demand](#).

Beef Production and Sustainability: Frank Mitloehner (UC-Davis) says research indicates that [modern beef production practices](#) produce quality products while improving sustainability. Dr. Mitloehner was a task force member for the CAST Issue Paper featured on the right. For an example of the ["eat less meat viewpoint"](#), check out this opinion piece.

Big Pig: A hunter in Alabama bagged an [820-pound wild hog](#) on his front lawn. **Note:** scroll down to the [International Section](#) for several links about [global hog production](#).

Angus Genomics: The American Angus Association [advanced its genetic analysis](#), moving to the "One Step" model for the calculation of expected progeny differences.

Egg Safety Update: Scientists developed a [technology that rapidly pasteurizes eggs](#) and could reduce the number of illnesses caused each year by egg-borne Salmonella bacteria.

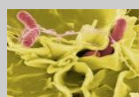
Rare Case of BSE Dealt with Quickly and Carefully: A case of BSE (mad cow disease) has been found in Alabama. USDA officials say the animal ["at no time presented a risk to the food supply"](#), or to human health in the United States."



[Air Issues Associated with Animal Agriculture: A North American Perspective.](#)

Poultry Production and Animal Care: A large company says it will [institute a six-point plan](#) to accelerate advancements in poultry care to meet consumer demands.

Consumers and Animal Welfare (related to above): This writer looks at survey information regarding the public's [attitudes about animal welfare](#) and consumer misconceptions.



Food Science and Safety News

World's Most Popular Stimulant (video): This site explains [how caffeine works and why](#) so many people use it--with all its positives and negatives.

Beef and Brain Health: This young agriculturalist takes a personal look at the links between [beef consumption and the possible prevention](#) of Alzheimer's.

Gassing Pathogens: A small plastic pouch could make the nation's produce safer by [helping to eliminate E.coli and other pathogens](#) from the surfaces of fruits and vegetables.

DIY Grocery: A Berlin-based start-up will distribute smart vertical farming systems to supermarkets, providing customers with the option to [hand-pick fresh vegetables](#) to reduce food transport emissions.

Striving to End Food Deserts: A California company created an indoor farm--a hydroponic enterprise that grows [fruits and vegetables in shipping containers](#) that are stacked in old warehouses or parking lots.

Assimilation through Food: When immigrants adapt to their new surroundings, the most immediate way this happens is [through the food they make](#).



Spam fries to the "Pork Almighty": State Fair food has become the weaponry in a [deep-frying battle among states](#).



Plant Agriculture and Environmental News

Too Much Beetle Juice (video): Japanese beetles are spreading across the country, and this year, [infestations appear to be at or near record levels](#) in parts of the Corn Belt.

Smokin' (video): This company is growing the [world's hottest peppers](#), with an average heat of 1,569,300 Scoville heat units.

Social Media and Crop Diseases: Farmers, agronomists, crop consultants, and specialists now have a place to collectively [document and track corn and soybean diseases](#).

The Perfect Tomato? Scientists at the University of Florida are on a [mission to make tomatoes taste perfect](#).

Virus-resistant Plant Technology: A Kansas State University plant pathologist is developing a technology that would [target DNA and RNA viruses in farm crops](#).

Nanobionics and Plants: MIT engineers have created [plants that can sense anything from nerve gas to explosive chemicals in groundwater](#), sending wireless warnings to users.



Scouting is the [best way to find and remove Palmer amaranth](#). They should be easy to see--some grow 8-feet tall or more.

The Best of Both Worlds: This Texas farmer explains how [organic and conventional methods](#) can be successfully combined, and this article looks at farmers who [use both biotech and non-GMO seeds](#).



International News

***High-rise Hog Housing:** An [eight-level hog barn is under construction in China](#)--the third of four buildings, each capable of housing 7,500 sows.

***Pig Production Insights:** This "World of Pigs" site contains dynamic tools that allow easy access to [pig production information from around the world](#).

***Global Pig Production:** This [listing of worldwide hog farms](#) with more than 100,000 sows illustrates the diversity of the global swine business.

Oblivious to Hunger: This poll reveals that less than a fifth of Americans are aware that [extreme hunger threatens the lives of 20 million people](#) in Africa and the Middle East.

A Nutritional Boost: Scientists say new disease-resistant and [nutritionally enhanced cassava varieties](#) present an opportunity to improve the livelihoods and health status of Kenyans.

Fatal Fungus: More than 100 dairy cows in New Zealand had to be put down when they digested a [fungus from their feed supply](#). Ergot is a naturally occurring fungus most commonly found in grains and grasses.



Using cameras and laser sensors, [sushi-delivery robots are coming to Japan](#). The ill-fated cat delivery system just didn't work.



General Interest News

Picture Perfect Vineyard (video): San Francisco farmers are [using what was once military aviation technology to grow better grapes](#)--bringing better data to precision agriculture.

Return of the Hygiene Hypothesis: This writer says "[dirt is good](#)," and this blogger explains why farm [germs might be the best medicine](#). However, many veterinarians and fair directors remind us that [animals can infect people](#)--they recommend hand washing and common sense. **Note:** related link in the caption under the photo at right.

Plastic--Not Always Fantastic? (opinion): This report claims nearly 80% of plastic waste accumulates in landfills or the environment--it says new, high-tech [methods to degrade and reuse plastic are needed](#).

Plastic--a Fantastic Idea? This milk company plans to use eco-friendly milk containers that [should lower the need for plastic](#).



Research indicates that [microbes on farms protect children](#) from asthma and allergies. This lad could be working up a sneeze, a laugh, or a good cry.

How Much Horsepower? Those ready to [purchase a new tractor](#) are often overwhelmed with all the options. The best way to find the right tractor is to hone in on the most important criteria.

Agriculture 2.0: Nebraska Food and Health Center seeks to link crops and health--connecting Nebraska's largest economic engine with [improving health outcomes for billions of people around the world](#).

Farm Safety Training App (short video): A new [app provides a realistic, first-person view](#) of an employee tasked with completing common maintenance jobs in a grain storage facility.

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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- * Society for In Vitro Biology
- * Soil Science Society of America

- * Syngenta Crop Protection
- * The Fertilizer Institute
- * Tyson Foods
- * United Soybean Board
- * Weed Science Society of America
- * Western Society of Weed 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.

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