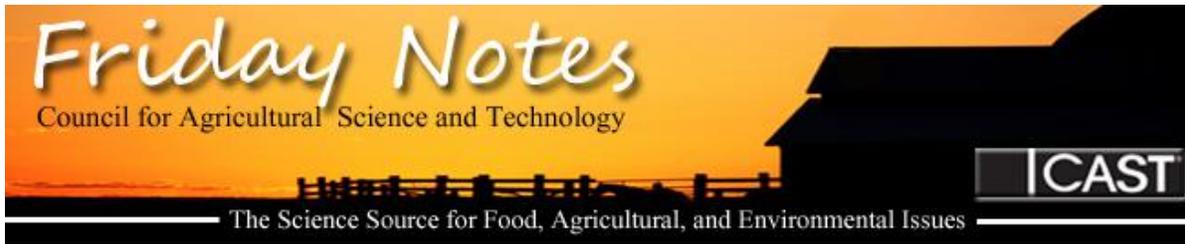


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*Friday Notes* is designed to enhance communication among various agricultural sectors, educators, students, and the public who are interested in a variety of plant, animal, food, and environmental issues. *Friday Notes* advocates the pursuit of credible, 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](#)

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[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)

### Fiery Beauty



*National Geographic* offers a "[photo of the day](#)"--one was the spectacle of a Russian volcano eruption.

### Nominate a Pig Farmer

[Who is the best pig farmer you know?](#) Nominate him or her for this year's America's Pig Farmer of the Year award by March 11.

### Plant Science Careers

The Farm Babe--with help from Kevin Folta--explains [career opportunities for students interested in plants](#) and agriculture.

### AAEA



The Agricultural & Applied Economics Association has rejoined CAST, and they provide a wealth of [information at this site](#).

January 19, 2018

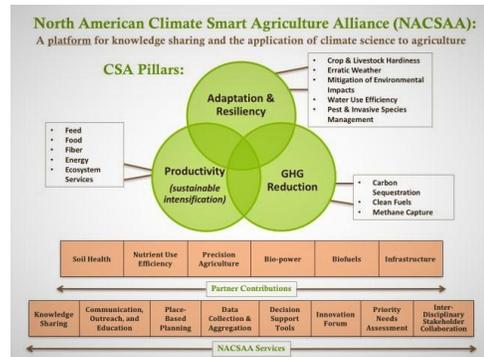
## Climate-smart Agriculture

*Organizations meet to discuss U.S. role*

Farm organizations are beginning to talk about the evolution of climate-smart agriculture and the need to ensure that the United States remains at the table, as the United Nations begins developing an agricultural framework for climate change.

Representatives from more than 30

organizations met in Washington, D.C., recently for the steering committee of the [North America Climate Smart Agriculture Alliance](#)--with a focus on three main goals: 1) sustainably increase agricultural productivity and farmers' livelihoods, 2) enhance adaptive capacity and improve resiliency, and 3) deliver ecosystem services, such as sequestering carbon and reducing or avoiding greenhouse-gas emissions.



## News and Views

**NAFTA Support:** Leaders from U.S. food and agricultural sectors created a coalition in support of the [North American Free Trade Agreement](#).

**Farm Bill Forming:** In the coming months, Congress will map out how it will spend upwards of \$500 billion on [food and farm programs during the next five years](#). Interest groups, farmers, and others are trying to have their voices heard as the bill forms (related link in Food Section).

**Ag-tech Startups:** These seven startups are part of the many [technological breakthroughs being made](#) today in areas like robotics and drones, data collection, predictive analysis, disease prevention, and alternative farming methods.

**Rural Health Care:** Rural Americans need a [health care system](#) that fits their unique needs, according to a report from the Bipartisan Policy Center.

## Challenges for Young Farmers

The National Young Farmer Survey examines four key [challenges facing farmers under 40](#).

## Pork Scholarships

The National Pork Board announces the opening of the application period of the [2018 Pork Industry Scholarships](#), a program open to college juniors and seniors with plans to pursue a career in swine production management.

## CAST Social Media



Click [here for links to CAST sites](#):

Twitter, Facebook, LinkedIn, Pinterest, videos, and blogs.

## News from the Far Side of the Barn

### Pet Surgery

**(video):** Veterinarians and students used technology, brain power, and persistence to [help a puppy that had been viciously attacked](#).



It ain't easy getting an armadillo to say "ahh."

**Peculiar Patients:** This UC-Davis veterinarian [sees some of the world's most exotic patients](#).

**Whales, Dogs, Humans, and Rescues:** A renowned marine biologist says a [whale saved her from a shark attack](#). Other humans claim animals have helped in times of need.

## Universities and Agriculture

*CAST offers students resources and free membership*

The Council for Agricultural Science and Technology has had a long relationship with university staff members, students, and researchers. CAST material goes out to the current 14 university members, and all [students are eligible for free individual membership](#). We also encourage universities to take full advantage of the [CAST Education Program](#)--resources, *Friday Notes* available for all students, research papers, and social media. *Friday Notes* editions regularly include links to interesting ag/science stories from universities. This week, we feature several below in addition to links listed in other parts of the newsletter.

A Columbus-based brewer is aiming to become the most sustainable brewery in central Ohio, and this [Ohio State graduate is putting his education to use as he helps pave the way to "greener" beer](#).

[This leafy-green machine at the University of Arkansas](#) is not only serving as an educational opportunity for students but also as a source of locally grown food for students on campus.

Undergraduate students at the University of Kentucky can [take advantage of a summer research program](#) without the added pressure of daily classroom responsibilities.

Texas A&M staff and faculty [came to the rescue of an estimated 2,000 sea turtles fighting for their lives](#) during last week's unseasonably cold temperatures.



CAST's education program includes these universities with highly respected ag/science programs.

Researchers at Kansas State [aim to increase the use of arable land acreage that is considered too steep](#) to use conventional equipment. Their solution: robots the size of a common wheelchair.

Key findings in a decade-long research project at the University of Nebraska-Lincoln may result in solutions to sub-Saharan Africa's [challenge with vitamin A deficiency](#).

## Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P. 1 volcano pic from nationalgeographic.com, ag/climate graph from dtnpf.com, and armadillo pic from trbimg.com. Animal Sec. bee pic from atlasobscura.com. Food Sec. map from dairyherd.com. Plant Sec. Mr. Potato Head graphic from bitsavedpieces.us. Inter Sec. lobster pic from bing.com. Gen. Sec. float pic from calpoly.edu. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



### *Animal Agriculture and Environmental News*

**Tipping the Scales (video):** A veterinarian at [the Denver Zoo put a king cobra with cancer in remission](#) thanks to a uniquely pioneered plan.

**Swimming Stroke (Video):** [Ever wonder whether or not all fish wiggle their tails the same way?](#) No? I bet you are curious now, though! This study by the University of Florida found the answer.

**Saving Honeybees:** German scientists stumbled upon a simple solution that could [deal a blow to the destructive mites](#) that have been harming honeybees.

**Bees Matter (related to above):** Click [here for access to the CAST Commentary](#) *Why Does Bee Health Matter? The Science Surrounding Honey Bee Health Concerns and What We Can Do About It.*

**Bee Brain (related to above):** Scientists take a [closer look at the inside of a bee's brain](#) to show which molecular processes control its behavior.

**Tracking Bovine Emissions:** This company plans to launch a fleet of satellites that can detect methane emissions--they will also be able to [track the supply of cattle](#).

**Chicken Muscle:** This scientist wanted to know what impact [mitochondrial activity in chicken cells](#) had on a bird's ability to convert food into muscle.

**Pig Care:** This farmer explains six ways she ensures the individual [health and safety of her pigs](#).



**The Bee Who Came in from the Cold:** This particular bee has been [found only in an Arctic area of Russia](#) that was originally used for nuclear testing.



### *Food Science and Safety News*

**Health and Hype (video opinion):** These chocolate enthusiasts take a [measured look at the hype about chocolate](#) and health claims.

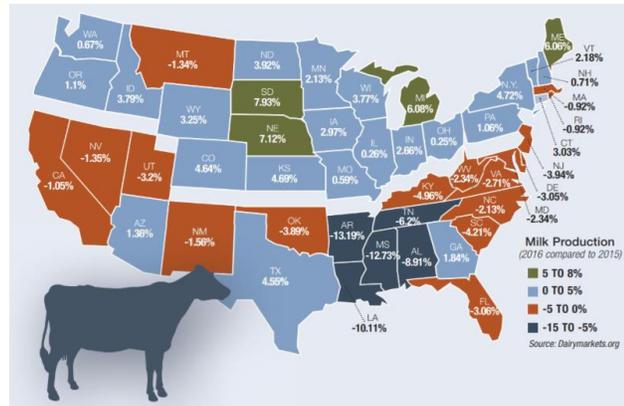
**Farmers Rank Third (audio):** This [CFI study found](#) that farmers rank third on [the list of people consumers trust to inform them](#) about how their food is grown (related link in General Section).

**Oh, SNAP:** Nearly [47 million Americans rely on federal food assistance](#), but a North Carolina State study found the aid doesn't cover half the cost of a healthy diet.

**2018 Farm Bill:** American [farmers and ranchers aren't the only ones who profit from a farm bill](#)--consumers benefit from agriculture's biggest legislation in three major ways.

**Student Food Insecurity:** According to this report, an estimated half of all [college students struggle with food insecurity](#).

**Wellness and Science (opinion):** The [wellness industry is booming](#), but some say the science behind it is shaky.



**Who's Making Milk: U.S. milk production continues to shift** in response to markets, policy, and climate.



## Plant Agriculture and Environmental News

**Robots in My Garden:** This article says an [army of robots could provide food](#), replenish topsoil, lessen herbicide use, and reduce carbon consumption.

**Robotic Weeder (related to story above):** [The future of weeding is here](#), and it is coming in robot form to a farm near you.

**Speed-breeding Plants:** Researchers have found a [way to accelerate crop growth](#), and they say this will help us rapidly breed superior plant varieties to feed the world.

**Productive Potatoes:** This Cornell study is investigating how over-compensatory responses in potato-to-herbivore damage could [reduce future uses of insecticides while continuing to increase productivity](#).

**Corn Trait Tracking:** Researchers from Iowa State and other universities will [map the genomes of 26 different lines of corn](#) to allow plant breeders and farmers to harness the crop's vast genetic diversity.

**Composting 101:** Two main types of home composting--[thermophilic composting and vermicomposting](#)--are recommended ways to help the environment.



University of Nevada-Reno staff and students are searching for ways to [reduce potato crop losses during storage](#).



## International News

**Cooperation in the Rice Fields (video):** Vietnam officials partnered with a German development organization and CropLife International to provide IPM [training courses for rice farmers](#).

**Pork on the Move:** Mexican states are now able to [export pork into the United States](#)--the USDA recognizes that Mexico is free of classical swine fever.

**Pig Production in Africa:** Malawi's agriculture has long been dependent on tobacco cultivation, but now [pig production is on the rise](#).

**Lobster Debate at Boiling Point:** The [Swiss government banned the practice](#) of throwing lobsters into boiling water while they are still conscious.

**Plenty of Food, Lots of Hunger?** This report claims there is more than enough food produced in the world to feed everyone, yet [815 million people go hungry](#).

**Food Production in Challenging Terrain:** From China to Peru, these time-honored practices in remarkable landscapes [help locals alleviate hunger](#).

**Soybean Exports:** A stricter export procedure for U.S. bulk and container shipments of [raw, unprocessed soybeans to China](#) took effect recently.



Too Big for Any Pot? Many debate the issue of boiling live lobsters. See the story at left.



## General Interest News

**Managing Farm Debt (opinion):** This article explains [several options regarding farm debt](#)--Farm Credit Services, local banks, national banks, and international banks.

**Consumers, Farmers, and Communication (opinion):** Charlie Arnot of the Center for Food Integrity discusses [consumer views of agriculture](#) and the need for transparency about modern farming.

**Enriching the Environment:** The USDA will invest nearly \$32 million this year to [mitigate wildfire risk, improve water quality, and restore healthy forest ecosystems](#) in 24 states and Puerto Rico.

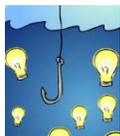
**Student Designs for Secondary Schools:** [Mississippi State University landscape students](#) designed and presented campus master plans for a Memphis-area high school.

**Personal Thoughts about Public Lands (opinion):** This writer says [the future lies in the protection of public lands](#) and promotion of recreational activities--and grazing rights--on those lands.



Dreams Take Flight--Cal Poly's impressive float won the Rose Parade's Past Presidents Trophy for the [most outstanding innovation in the use of floral and nonfloral materials](#).

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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Contact Colleen Hamilton at 515-292-2125, ext. 224 or [chamilton@cast-science.org](mailto: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 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
- \* Croplife America
- \* Crop Science Society of America
- \* DuPont
- \* Elanco Animal Health
- \* Entomological Society of America
- \* Innovation Center for U.S. Dairy
- \* Land O'Lakes
- \* Monsanto

- \* 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
- \* 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.*

## 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



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