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**

- **Free-range Poultry Production in the Spotlight--P. 2**
- Animal Agriculture News
- Food Science and Safety News
- Plant and Environment News
- International News
- General Interest News

**Whale of a Tail**

*National Geographic* came out with its [best travel photos of the year](#).

**The Pork Pact**

The Pork Checkoff has selected 12 college students from 9 different universities to represent the pork industry on the 2018 #RealPigFarming Student Social Forces team.

**Science for the Scouts**

Girl Scouts of the USA unveiled 30 new badges that will be awarded for efforts and advocacy in STEM and technology-related issues.

**Keeping Ag Real Road Trip**

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### Free-Range Poultry Production

*CAST paper looks at current research*

When it comes to credible poultry production data, it's hard to get it straight from the chicken's beak. As the authors of CAST's latest publication said, "There is a distinct lack of usable definitions and knowledge, as well as a great deal of confounding research related to this field."


CAST rolled out the publication at three events on July 18 in Washington, D.C. Social media comments and analytical press articles are using the material to further the discussion about this animal welfare issue. Scroll down to page two for more information.

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### News and Views

**The Future of Science:** A new report from the [National Academies of Sciences, Engineering, and Medicine](#) identifies the most promising scientific breakthroughs to be achieved in the next decade to increase the U.S. food and agricultural system's sustainability, competitiveness, and resilience.

**Tariff Effects:** The impact of China's [retaliatory tariffs](#) was reflected in the latest supply and demand report from the USDA, and the House Ways and Means subcommittee on trade heard from farmers about their many [trade war concerns](#).

**Ag Science Leader:** The administration selected [Dr. Scott H. Hutchins](#) to be Undersecretary of Research, Education and Economics for the USDA. Check here for a [biography of Hutchins](#).
Drovers and AgWeb will tag along on this family's road trip to Nebraska, South Dakota, and Minnesota in hopes of sharing their agricultural experiences with the world.

Submit an Idea
We welcome suggestions for future CAST publications and projects. Click here to submit ideas.

Teaming Up for STEM
Three departments at the University of Arkansas are teaming up for a summer STEM camp.

Moo University
South Dakota University is inviting dairy farmers to a tour where they can refresh their memories about best management practices for animal health and welfare.

Catch CAST Online!
Follow us on social media to stay up to date on the latest ag trends and recent CAST news!

Genome Editing and Ag: CAST's influential issue paper--Genome Editing in Agriculture: Methods, Applications, and Governance--has been featured in the media, downloaded from the website, and mentioned at this week's Farm Foundation Forum about "Gene Editing--Opportunities and Challenges." Check the final entry in the Plant Section below for more on this topic.

News from the Far Side of the Barn

Prosthetic Paw: After two-and-a-half years and 400 miles of travel, this missing pup is fitted with a new foot and family.

Bovine Bond (video): This young girl and her cow go for an evening run around the pasture.

Flight Footage (video): This unedited footage of crop dusting cotton fields is nothing short of a high-line obstacle course.

Going Ape: This adorable video of a chimpanzee reuniting with his foster parents has gone viral.

Impact of Free-range Poultry Production Systems
Publication rolled out at three events in the nation's capital


The events included a morning panel discussion cohosted by the Food Marketing Institute, a lunch program at the Longworth House Office Building, and an afternoon program at the Senate's Capitol Visitor Center.

Anthony Pescatore presents at a CAST rollout on the Hill. He and cochair Jacqueline Jacob (both of the University of Kentucky) led three sessions. Click here to access a video/PowerPoint presentation of the key findings.
As farmers in the United States try to develop new poultry operations that meet consumer demand and continue to make sustainability strides, they often deal with confusing definitions and confounding research related to this field. Led by Task Force Co-chairs Jacqueline P. Jacob and Anthony J. Pescatore, the authors of this issue paper bring attention and clarification to the topic as they assess various aspects of multiple poultry production systems.

Reactions and Resources

A *Feedstuffs* article says the paper shows that "while many perceive free-range poultry production systems to be more animal-welfare friendly, the research comparing the different production systems is inconclusive and often contradictory."

*An analysis in AgriPulse* agreed and noted the research shows that "The safety of poultry meat and eggs is determined more by management than by whether the birds are in confined facilities or outdoors."

The full text of CAST IP 61 is [here](#), and its companion Ag quickCAST is [here](#).

On a related note, this blog includes a look at the [backyard chicken phenomenon and the science breakthroughs](#) regarding the "sexing" of chickens.

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**Friday Notes News Categories**


**Animal Agriculture and Environmental News**

**Poop to Power (video):** Watch how researchers at Cornell University are using cow manure to power the city of Ithaca.

**Dirty Dairy Jobs (video):** The star of *Dirty Jobs* says his outlook on the agricultural industry was changed due to his experience on a dairy farm.

**One Is One Too Many (video):** The National Pork Board is working to maintain consumer confidence, as they look for innovative ways to keep needles out of packing plants.

**A Meaty Issue:** Alison Van Eenennaam (UC-Davis and 2014 BCCA winner) joins the discussion about "lab-grown meat" and who should regulate it.

**The Fight For Poultry (video):** Companies lose millions of dollars to blackhead disease—a North Carolina State professor is fighting back.

**Bovine Bliss:** This professor studies dairy cow well-being and behavior to analyze their level of comfort.

**Facing Biosecurity:** This professor is confident the use of facial recognition will create a new dimension of biosecurity for swine farms.
Better Beef (infographic): Sustainability is important to beef producers. Learn more about what farmers and ranchers have been doing to protect our environment.

What to Expect (video): This video demonstrates what poultry and egg farmers can expect if their farms are inspected by the U.S. Environmental Protection Agency.

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**Food Science and Safety News**

**The Filthy Truth (video):** According to a new USDA study, consumers fail to properly wash their hands before meals 97% of the time.

**When Boycotts Don't Work (opinion video):** What do you do when you want to boycott a product because of fear-based marketing—but you can't?

**The Meaning of Milk:** FDA commissioner Scott Gottlieb said his agency will soon begin enforcing regulations that define milk as an animal product, not a plant-based food.

**Dairy Dedication:** Discover how dairy farmers' dedication to their land and animals leads to fresh, nutrient-rich, and sustainable products.

**So Long Salads (opinion):** This registered dietitian from the University of Florida says to forget salads when slimming down--eating lean protein is a better idea.

**Food Fraud:** Emerging research from the University of Nebraska-Lincoln shows food fraud can have industry-wide impacts beyond just the consumer.

**Goodbye to Beer:** More Americans are putting down the big four beer brands—but what is motivating this change in drinking habits?

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**Plant Agriculture and Environmental News**

As summer heats up across the country, producers and consumers are cooling off by celebrating National Ice Cream Month this July.
Opportunity for Industrial Hemp (video): North Carolina’s newest cash crop is illegal for most farmers to grow.

Nutrients and the Dead Zone: Some tout the Iowa Nutrient Reduction Strategy as a way to combat ag contributions to the dead zone in the Gulf of Mexico—but researchers say the program isn’t working fast enough.

Behind the Grass (video): Did you watch the World Cup? Impress your friends with the science behind the success of the turf on the fields.

Urban Milkweeds: University of Kentucky Department of Entomology researchers found that monarch butterflies and various bee species use milkweeds in small urban gardens.

Tumbling Tumbleweeds (video): The silent star of classic Westerns is a plant on a mission—but why do they tumble?

F-Sand: Scientists are refining a process, with the help of sand and plant material, that could help provide clean water to many in water-scarce regions.

Biotech Blitz (opinions): Check out these three articles about the science and public perception surrounding genetics and agriculture: (1) A comprehensive look at CRISPR, mutation, and the food we eat, (2) a comedian’s sarcastic and insightful take on the controversial issue, and (3) 8 myths about GMOs debunked.

International News

Improving Lives in Bangladesh: Biotech eggplants are helping some of the world’s poorest farmers feed their families in South Asia—while reducing the use of pesticides.

Pork on the Move: According to Pig Progress World, pig and pork trade reached a peak in 2016 and 2017—since the early 2000s, trade had multiplied almost three times.

Sheep and Goats Turning Japanese: The USDA announced that the government of Japan will allow U.S. sheep and goat exports into the country for the first time in more than 14 years.

Crops That Feed Themselves: Researchers are looking at nitrogen-fixing bacteria as a possible solution to feeding the world without exhausting its natural resources.

Beefie: This Hungarian start-up will debut a new smartphone app that calculates cattle weights without touching them.

Fresh Food in the Desert: The United Arab Emirates reports that two companies are sponsoring a massive indoor farm in Dubai that will break the vertical farming world record.

Recall of European Frozen Veggies: The United States and Canada are among more than 100 countries potentially affected by a recall of frozen vegetables due to Listeria monocytogenes.
**General Interest News**

**Bloody Mosquitoes (video):** An up-close look at these pesky insects and the six needles they use to feed on your blood.

**Did Spiders Just Get Spookier? (video):** Of all the great flyers the world has known, it may come as a surprise that one of the best aviators in the animal kingdom doesn't even possess wings.

**Pollinator Partnership:** Solar farms are known as a source of green energy, but this future Cornell study will assess whether or not they could also offer ecological and economic benefits as pollinator-friendly habitats.

**Powered by Pig:** Duke Energy Corp. started generating power in March for its North Carolina customers using "renewable" natural gas created by capturing methane from the waste produced by 62,000 hogs.

**Setting Sail:** This experienced ocean racer plans to sail around the planet without the use of fossil fuels. Instead, he plans to make the trip using fuel from sea water, the wind, and the sun.

**Bacteria Be Gone:** This new technique—used to study the melting behavior of proteins—could be the answer to helping prevent the spread of antibiotic resistance.

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**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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