

# 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

[Ag on Campus--P.2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)



*Buds thicken and cast shadows; in a thunderstorm I almost forget the ice that was.*

Tess Taylor is the author of *Work & Days*, [poetry inspired by her year spent working on a farm](#)--as she calls it, "this fragile and ultimately, necessary relationship we have with the earth."

## 4-H on Capitol Hill

A U.S. House committee gathered for a [presentation by National 4-H Conference participants](#). The lawmakers stood up before 4-H delegates, alumni, and advocates to [praise the respected agricultural program](#).

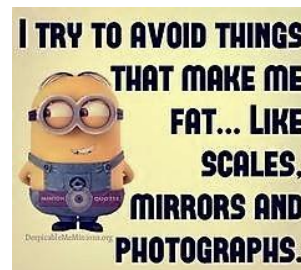


Earth Day

April 15, 2016

## Does This Nutritional Debate Make Me Look Fat?

A decades-old research project has prompted buzz in the nutritional world regarding fat, sugar, and dietary recommendations. The following links give insight into some of the reports and opinions, but the coverage has been wide, and the debates will certainly continue:



\*\*This article says carbohydrates are more dangerous to our health than fat, and the writer claims the world's [top nutrition scientists have been getting it wrong](#) for some time.

\*\*This researcher contends the latest reports do not add useful information and are [irrelevant to current dietary recommendations](#) that emphasize replacing saturated fat with polyunsaturated fat, including sources of both n-3 and n-6 fatty acids.

\*\*USDA-sponsored researchers studied whether or not there is a [difference in health effects](#) between white table sugar, high fructose corn syrup, and honey.

\*\*Some say the bottom line is to avoid foods high in trans fats and to eat unsaturated not saturated fats, with the key being to [eat a variety of foods and not too many calories](#). Maybe it all boils down to common sense.

## News and Views

\*\***Cuba and Ag Trade:** A bipartisan group of U.S. House members supporting efforts to end the Cuban trade ban hosted a [briefing for Congressional staff](#) to highlight opportunities for U.S. agriculture that would result from bilateral trade between the two countries. An example comes from this University of Arkansas report regarding [potential rice exports](#) to the island nation.

\*\***TPP Update:** More than 200 farm groups and food companies joined to deliver a letter to Congressional leaders [urging approval of the Trans-Pacific Partnership](#).

On April 22 more than one billion people in 192 countries will take action to [protect our environment](#).

### Ranch TV

The Texas A&M AgriLife Extension Service and the Texas Beef Council will launch a [Ranch TV website that offers video instruction and materials](#) for livestock producers and ranchers, as well as 4-Hers and high school agriculture students.

### A Bright Future for Animal Ag

The 2016 Animal Agriculture Alliance Stakeholders Summit on May 6 and 7 will [focus on finding solutions](#) to the challenges facing the industry.

### Teaching Practices

The University of Nebraska-Lincoln has joined the [Center for the Integration of Research, Teaching, and Learning Network](#)--a consortium of more than 46 institutions that promote proven teaching and mentoring techniques for graduate students in science, technology, engineering, and mathematics fields.

### CAST Social Media

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

**\*\*Livestock Welfare Rules:** Animal welfare [standards for organic livestock and poultry production](#) can be expected soon, according to the USDA Agricultural Marketing Service.

**\*\*Ag Economy and Government Aid:** According to this report, the agriculture slump in the United States means that farmers will get more government aid than at any time in the past decade, signaling the [rising public cost of crop surpluses and cheap food](#).

**\*\*Global Food Security:** The Chicago Council on Global Affairs says [food problems are related to unrest](#). Feeding the world and teaching the world to feed itself is not just a humanitarian endeavor.

## News from the Far Side of the Barn

**Nostalgia, Ghosts, and a Performing Pig (video):** Small-town movie theaters hold communities together. These three examples include one with a [celebrity appearance from the Wolverine](#) himself--Hugh Jackman.



*No, we can't show Babe yet again tonight.*

**Tiny Godzilla of the Deep (videos):** These videos of sea creatures include one of an [underwater iguana](#) that looks more like a mini Godzilla with its razor sharp teeth.

**Shawshank Redemption with Tentacles:** Inky the Octopus slipped out of a New Zealand aquarium tank, crawled across the floor, and escaped [through a down pipe to the ocean](#).

## University Programs Enrich Agriculture, Technology, and Science

University faculty and students are key to the world's food and fiber production in the years ahead, and CAST's [Education Program](#) offers access to information that can assist in the advancement of agriculture and science. Twelve schools with dynamic agriculture programs are members of the CAST Education Program, and the list will add another respected university next week. The following links provide a look at some of the many things

going on at these institutions.

\*\* According to this ranking, the University of California-Davis is a [top value for women in STEM programs](#).

\*\* Findings from a University of Kentucky student's undergraduate research experience could help farmers control one of their most troublesome pests--[the corn earworm](#).

\*\* Two Mississippi State University College of Agriculture and Life Sciences [students received awards for faculty-guided research](#) at the ninth annual Undergraduate Research Program Symposium.

\*\* Using 3-D printed fish, University of Florida scientists show that head motion can make a fish's movement and respiration more efficient. The study sheds light on how other undulating animals--and machines--[might use movement design to save energy](#).

\*\* Scientists from Texas A&M may have discovered a way to [coax algae into making larger amounts of oil](#). The team discovered an enzyme responsible for making hydrocarbons that could in turn increase the amount of oil algae could contribute to the biofuel process.

\*\* Due to research at The Ohio State University and other locations, [harmful algal blooms dangerous to human health](#) and the Lake Erie ecosystem--such as the one that shut down Toledo's water supply for two days in 2014--could become a problem of the past. (note: for related information, access the CAST Commentary [Benefits of Controlling Nuisance Aquatic Plants and Algae in the United States](#))

\*\* The [College of Agriculture, Biotechnology, and Natural Resources](#) is a founding college of the University of Nevada-Reno--a land-grant university.

Throughout the year, links in the various sections of *Friday Notes* include announcements, research items, and student interest stories from member universities.



## Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P.1 flowers pic from pbstwing.com, Earth Day sign from vettech.us.com, fat meme from pinterest.com, and pig pic from desmoinesregister.com. Animal Sec. cow pic from politico.jpg. Food Sec. coffee pic from precisionnutrition.jpg. Plant Sec. weed sprayer pic from producer.com. Inter. Sec. food pic from foxnews.com. Gen. Sec. Quixote cartoon from fiddlersgreen.net. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.



### *Animal Agriculture and Environmental News*

**Handling Cattle with a Minimum of Stress (video):** This cattle farmer explains that her goal is to [reduce the total stress on the calves](#).

**Factory or Farm? (opinion video):** This hog farmer provides his [insights about factory farms](#) and what the term really means.

**The Possibility of Avian Flu (opinion):** Planning for epidemics, animal or human, is to a large extent based on what a disease did the last time--[prediction is difficult](#).



What? Me worry?

**Green Cattle?** This study indicates that an increase in cattle production on Iowa's agricultural landscape [could lead to lower greenhouse gas emissions](#).

**Bacteria on the Menu?** These Iowa State University researchers are studying the chances that [feeding bacteria to livestock](#) could cut antibiotic use.

**Organic Meat Guidelines:** The USDA's National Organic Standards Board [proposed new guidelines](#) for organic meat and poultry production that would provide a higher standard of animal welfare.

**Halting Use of a Drug for Pigs:** The Food and Drug Administration is moving to [withdraw approval for the swine drug carbodox](#), citing the potential cancer risk to consumers.

**Halting the Halt? (related to above):** The company featuring carbodox will "vigorously defend" the pork antibiotic [against the FDA proposals](#).

**Biotech Mosquito Proposal:** The Food and Drug Administration is extending the comment period on its proposal to allow an [experimental release of gene-edited mosquitoes](#) in Florida to combat the Zika virus.

**Zoobiquity:** During a Zoobiquity 6 Conference at the University of Pennsylvania, physicians, medical students, and veterinarians examined the idea that there is [little difference between human and animal medicine](#).

**Adding to the Nine Lives:** A research project in the College of Veterinary Medicine at Kansas State University has been successful in [treating a deadly cat disease](#) that had previously been nearly 100% fatal.



## *Food Science and Safety News*





**The Perfect Cup (video):** Coffee is one of the most popular beverages in the world, but not every cup is created equal. From the bean to the brew, [science can help produce the perfect cup](#).

And I get free refills, too!

**Food Fraud:** It is difficult for consumers to decide [what is genuine and what is fake](#)--from wood pulp to horse meat in some food.

**Genetics and Food Patterns:** Growing evidence shows a [one-size-fits-all approach to nutrition](#) is probably wrong.

**Toddler Junk Food Habits:** These findings show that--for many--[bad eating habits start earlier](#) than you might think.

**Potato Bars in Schools:** This effort includes installing 3,000 "potato-friendly" salad bars [in schools across the country](#).

**Eating at the Grocery Store:** Apparently "retail-host restaurants" make up the [fastest growing segment](#) of food marketing--in grocery stores, convenience stores, and drug stores.

**Food vs. Climate:** New research suggests that the future effect of [food waste could end up accelerating climate change](#) at a worrisome rate in coming years.

**Sweet, Bitter, Romantic?** Our emotions might influence our perceptions of taste, but [what we taste can also change how we feel](#), according to these scientists.



## *Plant Agriculture and Environmental News*

**Seeds and Spies (video):** U.S. officials urge agriculture executives and security officers--and farmers--to [increase their vigilance and report](#) any suspicious activity.

**Precision Weed Control:** This infrared spraying technology supposedly [detects and treats individual weeds](#) using red lights, sensors, and a nozzle control system installed along the boom.



Zapping the weeds with precision.

**Farmland Use:** The [number of organic farms is increasing](#), according to newly released USDA data. Nearly half of U.S. [cropland is planted with genetically engineered crops](#), the bulk of it in corn and soybeans. However, the [growth of genetically modified crops dipped for the first time](#) following two decades of steady increases, according to a recently released report.

**Genomes and Nitrogen:** Plant biologists have pinpointed the area of [genomes within nitrogen-fixing bacteria in roots](#)--called rhizobia--that is being altered when the plant they serve is exposed to nitrogen fertilizer.

**Grapevines:** This report provides research on the [use of biological control agents and plant resistance inducers](#) against phytopathogenic infections by fungi, oomycetes, bacteria, and phytoplasma.

**Up on the Roof:** Faced with what scientists call "the urban heat island effect," cities around the world are encouraging the [development of roof gardens](#).

**Pest Control the Natural Way:** Biological pest control is the means of controlling pests [using other living organisms](#)--for example, breeding ladybirds to eat aphids.

**Focused on Fertilizer:** The goal of this research work was to [assess the efficiency of celeriac fertilization](#) with phosphorus and potassium under conditions of integrated plant production.



## *International News*

**Rhino Airlift (video):** Check out one man's wild idea for saving rhinos--[airlifting them from South Africa to Australia](#).

**Veggie Food Art:** These Japanese foodies take veggies out of the salad bowl and reassemble them into colorful, meticulous, and [eye-catching "cakes."](#)



Veggies turned into food art.

**Glyphosate in the EU:** The [European Parliament backed glyphosate](#) use, but with conditions.

**Water Woes:** More than 80% of 2,103 wells for underground water tested across heavily populated parts of China were [badly contaminated by industrial and agricultural runoff](#) as unfit for drinking and home use.

**Growing Plants in Space:** These German agriculturalists want to find out if plant cuttings build roots in zero gravity and [how the roots behave over time](#).

**Pigs in the Land of the Bulls:** Spain has overtaken Germany as the country with the [largest pig herd in the European Union](#).

**A Real Rat Problem:** As [giant rats menace Pakistan](#), conspiracy theories swirl and locals try to combat the rodents.

**Chef Novice Abroad:** This young American lawyer [leaves it all behind to cook in Spain](#), where she discovers more than tempura quail eggs and creamed cauliflower.



## *General Interest News*

**An Oasis in a Hidden Food Desert (video):** This Indiana farmer will [donate his harvest to people in need](#)--500,000 pounds of food in the first year. His nonprofit is partnering with food pantries and soup kitchens.



**A Mighty Wind?** The U.S. [wind energy industry had a memorable 2015](#)--installing thousands of turbines across the country, supporting a growing number of jobs, and increasing demand from corporations.

Tilting at windmills--this blog looks at the rise of [wind turbines in the fields of dreams](#).

**In the Doldrums:** North Carolina State University researchers find that most people are [unwilling to rent vacation homes](#) that have a view of offshore wind turbines--or they want to pay less rent.

**Water Crisis (opinion):** Growing competition for water, climate variability, weak regulations, and aging infrastructure contribute to a [water availability crisis called "the top global risk"](#) by the World Economic Forum.

**Stress on the Farm (podcast available):** As the ag economy struggles, the financial and [mental health stress felt by farmers](#) and their families is growing.

**Want Your Wire Brush Medium-rare or Well-done?** Dan Murphy looks at a most [unlikely hazard of grilling](#)--the accidental ingestion of wire brush bristles.

**Slow Internet Hindering Ag:** While many who live in the city experience a speedy internet, some of [those living in more rural areas](#) of the United States do not have the same luxury.

**Neuroscience and Food Innovation:** Neuroscience is set to [revolutionize the way food and drink products](#) are designed and consumed, this expert claims.

**You Want What?!** Check out the top [10 things the farm implement person](#) at the parts counter hears on a typical day.

## 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."

*CAST provides Friday Notes as a benefit to its members. Please do not forward, edit, copy, or distribute the Notes in any form to nonmembers without the express permission of the CAST Executive Vice President Kent Schescke (kschescke@cast-science.org). Instead, please encourage your colleagues to join CAST and thereby become eligible for all membership benefits.*

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 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
- \* California Dairy Research Foundation
- \* Council of Entomology Department Administrators
- \* Croplife America
- \* Crop Science Society of America
- \* DuPont Pioneer
- \* Elanco Animal Health
- \* Innovation Center for U.S. Dairy
- \* Monsanto
- \* 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
- \* United Soybean Board
- \* Weed Science Society of America
- \* Western Society of Weed Science
- \* WinField, a Land O'Lakes Company

*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

- \* 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



Note: WinField Solutions (Land O'Lakes) provides sponsorship for the distribution of *Friday Notes* to the National Association of Agricultural Educators.

**Dan Gogerty (Managing Communications Editor)**  
The Council for Agricultural Science and Technology  
4420 West Lincoln Way  
Ames, Iowa 50014-3347  
Phone: 515-292-2125, ext. 222; Fax: 515-292-4512; E-mail: [dgogerty@cast-science.org](mailto:dgogerty@cast-science.org)



**\*\* With assistance from Carol Gostele (Managing Scientific Editor) and Kelsey Faivre (Admin. Assistant, Editing and Marketing).**