



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

[Invasive Species and a Timely Paper/Presentation--P.2](#)

[Animal Agriculture News](#)

[Food Science and Safety News](#)

[Plant and Environment News](#)

[International News](#)

[General Interest News](#)



*morning glory!
the well bucket-entangled,
I ask for water*

The eighteenth century haiku poet, [Fukuda Chiyo-ni](#), decided to go elsewhere for water rather than disturb the beauty of the morning glory blossom that had grown entangled in her water bucket.

National Ag Day Winners

[Check out the winners](#) of the 2016 National Ag Day video production and essay writing contests.

National FFA Week

Click here for information about [FFA activities](#) during the week of Feb. 20-27.

Scholarships Open

The [American Society of Agronomy](#), [Crop Science Society of America](#), and [Soil Science Society of America](#) invite nominations for their 2016 awards and scholarships--

February 19, 2016

World Water Day--an Appreciation for What Sustains Us

In reality, every day is "water day," but the United Nations has proclaimed a specific date (March 22), and [International World Water Day](#) reminds people about the significance of fresh water and promotes sustainability for water resources management. It is a day to celebrate the crucial substance--a day to prepare for how the world manages water in the future.



Media channels are rightfully filled with stories about water, and communities around the world would have versions of their own struggles or perspectives. From Mumbai to Cairo to the Chesapeake Bay to Flint, Michigan--folks need clean, safe water.

This article looks at a report titled "[Agricultural Water--Free Flowing Markets Sustain Growth](#)." It focuses on water markets as tools that have proven to be effective at delivering water where it is most valued.

In this editorial, Chuck Jolley [looks at the contentious WOTUS](#) arguments and wonders about ways the differing sides could get along. The waters of the U.S. are important for all Americans.

News and Views

****Cuba Connection:** President Obama will pay an [historic visit to Cuba](#) in the coming weeks, becoming the first sitting president to set foot on the island in nearly seven decades.

****Food Fight--Labels:** Republicans say the administration's calorie labeling rules scheduled to go into effect this year are too burdensome. The House passed a bill that would "[provide relief from government rules](#)," and it now goes to the Senate. The administration says [the rules promote public health](#), and the bill would undercut the objective of providing clear, consistent calorie information to consumers.

****Supreme Court and Ag:** The next [Supreme Court justice could play](#)

recognizing researchers, educators, extension and industry professionals, and undergrad/grad students-- deadline March 22.

Nominations for Pig Farmer Award

The hunt is on for America's [Pig Farmer of the Year Award](#)--a U.S. pork producer who not only excels at raising pigs but who also wants to share his or her story of farming with the American public. Online applications will be accepted until March 13.

Student Business Leaders

A University of Arkansas entrepreneurship team--focused on transforming bladder cancer therapy--won the grand prize at one of the premier [graduate student business plan competitions](#).

Ag Teaching

According to this organization, there are [more agricultural teaching jobs](#) than there are graduates to fill them.



CAST Social Media

Check the popular CAST [Catch of the Day](#) [here](#) and the visually appealing [CAST Pinterest site](#) [here](#).

[a decisive role](#) in key agricultural issues pertaining to water and land rights--and maybe immigration as it affects agriculture.

****Zika--Tragic Disease and Viral Rumors:** Like Zika itself, [rumors about it have replicated with viral ferocity](#) through social media and word of mouth--frustrating the Brazilian authorities. And [this article looks at the tech innovations](#) that are on the drawing board because of the mosquito problem in Brazil and other places.

****Farm Finances:** With more evidence of falling farm income and increased demand for farm loans, [economists encourage producers](#) to stay focused on securing their operation's financial footing in 2016.

****A Bit Fractured in the Fracking Zone:** [Fracking takes hits](#) from quakes, new regulations, and oil company bankruptcies.

News from the Far Side of the Barn

Matter of Perspective (video):

Patrick Hughes specializes in "[reverspective paintings](#)"--and this 22-second video might just tickle your brain.



It's all in the way you look at it.

Why You Can't Keep

Cockroaches Out of Your

Home (video): [Cockroaches are miniature transformers](#) that can compress to half their size, run fast, and even inspire a new generation of robots used for search and rescue.

Fly Me to the Moon: This site claims it can [sell you two acres of land in outer space](#). And we have a bridge in Brooklyn we'd like to sell you.

Invasive Species Awareness Week and a Timely CAST Publication/Presentation

Invasive species of various types represent a multibillion-dollar annual drain on our economy, experts say. Volunteers in communities across the nation are getting ready for National Invasive Species Awareness Week, scheduled for February 21-27. Many groups, including the Weed Science Society of America (WSSA), will be focused on measures that can help prevent damage from invasive species.

[Click here for WSSA information.](#)

Of course, the focus on invasive species ties in smoothly with the new CAST Commentary about bioenergy production and the potential use of low-invasive plants. The authors of the timely paper believe a step-by-step program is needed to avoid widespread problems--symbolized by the kudzu infiltration during the past decades.



The information below is a continuation from last week--with some updates. You still have a chance to attend the presentation or join in on the afternoon webinar.

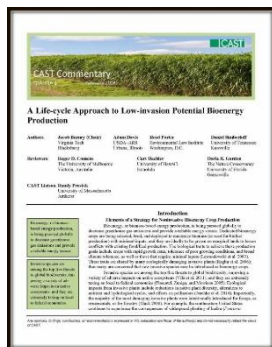
CAST Presents New Research Paper about Bioenergy Production and Dealing with Invasive Species

CAST, in conjunction with the National Coalition for Food and Ag Research (NC-FAR), will present the new research commentary--*Life-cycle Approach to Low-invasion Potential Bioenergy Production*--on February 22 to staffers from the House and Senate on Capitol Hill. CAST will then provide the material at an afternoon session cohosted by the Environmental Law Institute.

The presentation and webinar are free and open to the public.

Presentation: Monday, February 22, 2016, 3:30-4:30 p.m. EST
Environmental Law Institute, 1730 M Street, NW, Suite 700, Washington, D.C.

Register for [the webinar here](#). RSVP to [attend in person here](#).



Bioenergy is being pursued globally to decrease greenhouse gas emissions and provide a reliable energy source. To lessen conflicts with existing food/feed production, bioenergy crops are bred to grow on marginal lands with minimal inputs. Many are concerned that new invasive species may be introduced as bioenergy crops.

The authors of this commentary show that the risk of invasion can most effectively be prevented through a life-cycle approach that adopts appropriate scientific and policy tools at each step in the production process, from crop selection to field production, feedstock transport and storage, and decommissioning--thus avoiding

the "kudzu effect." This paper provides a clear, comprehensive framework to guide regulatory agencies in the selection and permitting of biofuel feedstocks.

Presenter:

- Dr. Jacob Barney, Assistant Professor of Invasive Plant Ecology, Department of Plant Pathology, Physiology, and Weed Science, Virginia Tech
- Read Porter, Senior Attorney and Director of Invasive Species Programs, Environmental Law Institute

Commenters:

- Aviva Glaser, Senior Policy Specialist, National Wildlife Federation
- Anthony Koop, Plant Epidemiology and Risk Analysis Laboratory/Center for Plant Health Science and Technology, USDA/APHIS, PPQ

Moderator:

- Kent Schescke, EVP, Council for Agricultural Science and Technology

Note: CAST will release this paper on February 22, 2016. It will be available for free download at that time on [the CAST website](#).

Friday Notes News Categories

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right). P.1 morning glory pic from patheos.com, water pic from allsdfile.jpg, and artist pic from patrickhughes.com.uk. P.2 cartoon from comicsdontunderstand.com. Animal Sec. cow pic from redbubble.jpg. Food Sec. chocolate pic from designtaxi.com. Plant Sec. shirt pic from etsy.com. Inter. Sec. Madrid pic from fastcoexist.com. Gen. Sec. squid pic from squid.jpg. Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service.





Animal Agriculture and Environmental News

Youthful and Pro Pork: These scholarship winners are open to change, and they have a drive to [advance the U.S. pork business](#) to higher levels.

Lively Livestock Production: In the United States, combined beef, pork, and poultry production has been [running above last year's levels](#) since January 1st, and last week was no different.

Watch Your Phrase-ology: The [poultry industry deals with marketing terminology](#) such as "natural," "organic," and "hormone free." Now they are faced with several terms that make statements about antibiotics.

Cow Comfort Connotations: This rancher says "grass fed" and "pastured" are buzz words consumers want to hear, but he contends that [animals perceive them differently](#) at times.

Cows, Waterbeds, and Bovine Sleeping Habits (related to above): This blog looks at the common dilemma--should I [buy my cow a waterbed](#)?

Confinements in Court: An Indiana hog corporation has defended itself against five [lawsuits brought by its neighbors](#) based on negligence and nuisance--a court recently sided with the pork producers.



I'm hung up on cow comfort.

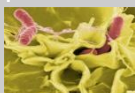
On the Hunt (opinion): This Dan Murphy editorial profiles a Texas foodie who [went on a deer hunt](#) in order to "learn about hunting and the morality of meat."

University Bee Research: Many reports say the population of managed bee colonies is decreasing; University of Nevada-Reno bee researchers are [working to find solutions](#) to the growing problem.

Livestock as a Science Lab: A university and a 4-H group show that [youth use science in many aspects](#) of raising animals--anatomy, physiology, biochemistry, virology, bacteriology, endocrinology, and more.

Pet Food Pantries: These pantries have sprung up in response to pleas from [people who see their pets as family](#) and spend their last dollar on a can of pet food, even if it means going hungry themselves.

Making Connections: Dr. Ronnie Green (Univ. of Nebraska) and ag advocate Michele Payn Knoper discussed the issue of [disconnect between consumers and producers](#) at the Range Beef Cow Symposium.



Food Science and Safety News

A Little Chocolate Decadence for the Soul (videos): These dessert presentations use [melting chocolate to reveal surprise centers](#) like brownies, fruit, or even ice cream.

The Perfect Burger? (opinion video): This award-winning chef puts so much thought into her burgers you'll almost [feel bad about eating one](#), according to this writer.

Parmesan Wood: Somehow, cheese advertised as 100% Parmesan appears to be [including wood pulp](#) and other cheese.

Waste, Hunger, and the World: This [comprehensive look at food waste](#) from *National Geographic* provides one possibility regarding "how to solve world hunger."

Omega-3s and Blood Pressure: Consuming certain omega-3s at doses as low as 0.7 grams per day may produce clinically meaningful [reductions in systolic blood pressure](#), according to a new study from the UK.

More Omega Research--Fishy or Not? (related to above): Even in countries with higher fish intakes, omega-3s [might lower depressive symptoms](#), according to Japanese research.

Deluxe Space Food: Alabama high schools compete for creation of gourmet [food options aboard the International Space Station](#).



Crackin' into Some Protein: According to this site, [one egg provides more than six grams of protein](#)--or 13% of the recommended daily value--with almost half of it in the yolk.

Research to Make Food Safer: The USDA awarded a million-dollar grant to a team led by a Texas A&M professor. The research will focus [mainly on addressing concerns of antimicrobial resistance](#).



Plant Agriculture and Environmental News

Munching on Trees (video): This [tree-eating machine](#) can clear entire orchards--almond trees cut down and chewed up--then turn it all into mulch in just a matter of moments.

Precision Ag and Innovation: This site provides six key takeaways from the PrecisionAg Innovation Series in St. Louis--[Data Integration from the Ground Up](#).

Resisting Sudden Death: Iowa State University researchers have narrowed the [search for genes that help soybeans](#) resist sudden death syndrome.

Jurassic Parked: Apparently, organisms can be trapped in amber--preserved in hardened tree resin--waiting for [scientists to unlock their secrets](#) eons later. The latest find is a flower dubbed *Strychnos electri*.

Buzzed about Rapini: Popular in Italy, rapini--or broccoli raab--is a turnip-like [vegetable featured in the recipes](#) of TV celebrity chefs. Honey bees love it too--for its bright yellow, pollen-packed flowers.

Antibiotic Resistance--Naturally: Research finds antibiotic-resistant bacteria and genes in soils not grazed by livestock or inhabited by people--suggesting that antibiotic resistance [occurs naturally in the environment](#).

FDA to Test for Glyphosate: The Food and Drug Administration plans to begin [testing corn and soybeans for glyphosate](#) residues, the agency confirmed.

Indoor Plant Health: These bloggers have compiled a handy [guide of most common plant diseases](#) and their remedies.

Strawberry Time: According to a University of Florida study, farmers are adapting to a web-based monitoring system that can help the environment by using less chemical treatment to [prevent strawberry diseases](#).



Careful of those organisms trapped in amber tree resin.



International News

Hairy Panic and Yellow Big Head (video): A plant known as "hairy panic" has left parts of a [small town in Australia inundated](#) with tumbleweeds--and global news media attention.

Madrid Is Covering Itself in Plants: To help fight rising temperatures, [trees and plants are growing](#) in vacant lots, city squares, a former highway, and even regular city streets.

Why Is China Spending Big to Buy an Ag Company? The biggest overseas purchase in Chinese history is meant to ensure the world's largest [country can keep feeding its people](#).

Promoting Conversation and Dumbing Down the Smartphones: IKEA Taiwan has produced a cleverly designed table that [requires diners to sacrifice their smartphones](#) in order to heat up their food.



Going green in Madrid.

Tractors in Cuba: The Obama administration approved the [first U.S. factory in Cuba in more than half a century](#)--a plant assembling as many as 1,000 small tractors a year for sale to private farmers in Cuba.

Gone Fishin': The Gulf of Mexico is open for commercial fish farming. The government announced that, for the first time in the United States, [companies can apply to set up fish farms in federal waters](#).

Fished Out? (opinion): This group says seafood businesses and fishing nations [must commit to sustainability](#). The world's oceans are in trouble--marine life and those who rely on the sea are more vulnerable.

It's a Gas: Denmark researchers and a number of commercial partners will examine whether or not the addition of organic oregano to cattle feed can [reduce methane emissions](#).

Robots in the Vegetable Patch: According to this article, the [future of farming has arrived](#)--it is vertical, soil-less, and run by robots.



General Interest News

Giant Squid Follow-up--How Was It Photographed? (video): This brave diver recorded some of the most vivid and close-up [footage of a 12-foot-long squid](#) ever seen.

Farming Gone Viral: Greg Peterson (of Kansas Peterson Brothers fame) says that after getting an ag communications degree from Kansas State, he and his brothers made farm videos "for fun." [It all took off from there](#). And [in this article](#), the boys lead an "I'm Farming and I Grow It" forum. Check out the brothers' [YouTube video site here](#).

CRISPR Update (opinion): The U.S. government does not fund [research about gene editing in human embryos](#), but private or state agencies are not prohibited. A California institute is considering such research.



It would make a lot of sushi.

The Dirt Cure: A new book examines research about the [benefits for children of spending time on farms](#) and other green places--for example, helping to prevent allergies and enhance immunity.

Farm Germs Might Be the Best Medicine (related to above): A look at the [hygiene hypothesis](#) and a run through the haymows, groves, and pastures of a family farm.

Dunking, Hitting, Blocking, and High Sticking Down on the Farm: These [seven professional athletes](#) (NBA, MLB, NFL, and NHL) are also farmers.

Greening Up the Economy: A new university study shows that the "green industry" [generated billions of dollars](#) in revenues annually--and more than two million jobs in the United States

There's Gold in Them Thar Biosensors: This scientist [looks for gold with a hand-held biosensor](#) that uses a component of DNA to detect traces of the element in water.

Ag Promoter: Betty Cantrell--Miss America 2016--is a farm girl at heart and a 4-H alum. She is [promoting agriculture and healthy lifestyles for kids](#) through her "Healthy Children, Strong America" platform.

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, 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 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

- * National Turkey Federation
- * North Central Weed Science Society
- * North Carolina Biotechnology Center
- * Northeastern Weed Science Society
- * Poultry Science Association
- * Society for In Vitro Biology
- * 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



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