Marijuana laws vary state by state.

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
CAST News--P. 2
Animal Agriculture News
Food Science and Safety News
Plant and Environment News
International News
General Interest News

Ka-boom!
The world's largest aerial fireworks display was set off in Colorado.

Announcements

The U.S. Census Bureau explains how it will reach rural and small-town areas for the count--and why it is important for those residents.

The National Pork Board opened the application period for a new series of swine research fellowships.

The National Cattlemen's Beef Association announced the winners of its 2020 Beef Quality Assurance Awards.

This doctoral student at the University of Nevada-Reno is following her passion for soil science, soil ecology and natural resources.

News and Views

February 14, 2020

Hemp Prospects
Rough Year But Many Still Optimistic

Interest in hemp--and its more intoxicating cousin, marijuana--has been on the rise for the past few years, but pipe dreams can turn to reality when operations get underway. For some farmers, the past growing season was frustrating due to regulations, costs, markets, machinery, and other factors. Apparently, the challenges are not slowing down the overall optimism. The amount of land licensed to U.S. farmers for growing hemp more than quadrupled last year.

Hemp has a lower concentration of THC than marijuana does, and it can be used in a wide range of products--including fibers, textiles, paper, construction and insulation materials, cosmetic products, animal feed, food, and beverages.

U.S. states are adjusting regulations regarding hemp, and cannabis (marijuana) laws in the United States are experiencing a tidal shift. Because of varying state restrictions, it can be crucial to establish the THC levels in the plants--whether the crop is hemp or marijuana. Texas A&M experts developed a handheld spectrometer to help determine THC levels.

Government agencies, companies, organizations, and universities are involved in hemp/marijuana research. For example, Tuskegee University has been selected to grow and study the industrial hemp plant. For more information about hemp or marijuana, check with universities and the many sources available online.

Virus Updates: China reports a jump in coronavirus (COVID-19) cases, the death toll rises to 1,370, the cruise ship saga continues, and a White House official discusses the effects on trade and agriculture.

FY2021 Budget Proposal: President Trump released his budget proposal, USDA Secretary Perdue issued a companion statement, some commentators criticized cuts to agriculture programs, and others worry that science agencies could suffer.

Ag Economics: The USDA increased its estimate of 2019 net farm income due to larger livestock revenue and direct government payouts, and the agency announced the release of $3.6 billion in trade-war payments to farmers and ranchers—the total for 2019 now at $14.5 billion. Some dispute the fairness of such payments.
A May conference at Iowa State University will explore the challenges and opportunities that the future provides in animal genetics and genomics.

The EPA and Refinery Exemptions: EPA Administrator Andrew Wheeler says his agency is reviewing how it handles RFS small refinery exemptions in the wake of a recent Tenth Circuit Court ruling.

Cal Poly will host the 2020 Aspire to Grow Conference exploring innovation in the food and agriculture sectors on March 4.

Winged Feet (video): If you don't mind crispy-fried chicken on your feet, you might go for these KFC Crocs.

Eat the Heat (videos): This long clip (jump to the 16-minute mark) shows how Oscar-nominated Margot Robbie deals with hot peppers, and this much shorter viral video shows how a young girl reacts to chomping into a jalapeno.

Wing Fighter Club for Mice? A photo of sparring subway mice won the People's Choice photo award.

CAST Happenings

The Return of the CAST Blog

Along with our new website, CAST launched a new blog. You can still find an archive of all our previous blog posts, but expect to see fresh content regularly from our staff and guest writers.

Up first, we refreshed our list of podcast episodes you should be listening to in early 2020. From the beef with dairy to misinformation and the coronavirus, we have five episodes covering big topics from the past few weeks.

It's Time to Renew Your CAST Support!

If you haven't renewed your CAST membership for 2020 yet, there are several convenient ways to do so:

- You may log in at https://www.cast-science.org/ and renew online;
- Complete and email this interactive membership form with your credit card information to Colleen at chamilton@cast-science.org;
- Call our office at 515.292.2125 to pay by phone with your card; or
- Send a check to CAST, 4420 West Lincoln Way, Ames, IA 50014.

Don't hesitate to contact Colleen with any membership or login questions. Thank you for your continued support of CAST's work!

Forthcoming CAST Publications

Impact of Recruitment and Retention of Food Animal Veterinarians on the U.S. Food Supply is an issue paper looking at the challenges of recruiting and retaining food animal veterinarians in the United States—including factors such as consolidation, technology, funding, rural influences, student training, and financial strain.

Producing Food Products from Cultured Animal Tissues is a commentary that will focus on the issues surrounding cell-cultivated meat.
The Microbiome's Positive Impacts on Crops: A plant's microbiome holds many potential applications for pest control and yield enhancement. This paper will highlight the impact microbial products have on crop production and the importance of research.

The Need and Challenge for Effective Stewardship of New Pest Management Technologies in Agriculture is a CAST Commentary that considers the use of genetically modified crops, weeds, and pests to help with crop management.

Free Publications

CAST papers are now available for free download on the newly formatted CAST website.

**Friday Notes News Categories**

Photos courtesy of the Agricultural Research Service (top masthead); TopLatest News (globe at right); P. 1 firework pic from unofficialnetworks.com, pig pic from msn.com, Aspire to Grow graphic from calpoly.edu, hemp graphic from purduehemp.org, and skunk collage from bearandblue.com and cobinlife.com. Animal Sec. fish pic from point-au-baril.jpg and field pic from nationalhogfarmer.com. Food Sec. airplane photo from vox-cdn.com and exercise pic from topsimage.com. Plant Sec. researchers photo from columbianmissourian.com and algae pic from abcnews.go.com. Inter. Sec. college photo from suiss.ed.ac.uk, and pangolin pic from pinktreefrog.jpg. Gen. Sec. dog collage from dailymail.co.uk and beer graphic from growthis.com. from Unless otherwise noted, photos courtesy of the USDA Agricultural Research Service or CAST.

**Animal Agriculture and Environmental News**

**Happy Eggs:** A food company's advertising campaign highlights the role its "Happy Eggs" play in increasing vitamin D intake.

**Beef on the Move:** A university expert analyzes 2019 U.S. beef exports and imports.

**Pig Production (videos):** This clip examines the important considerations for alternative swine production systems regarding where to source ingredients and feed.

**ASF Preparation:** A veterinarian who has been in China to help with the African swine fever outbreak says U.S. producers and state officials need to prepare more for a possible outbreak.

**Dairy Techniques:** A new online training course from North Carolina State University is designed to help dairy processors improve environmental monitoring programs for better food safety and pathogen control.

**Flingin' Poo:** Actually, most hog manure is injected, and this research uses anecdotal evidence to indicate that swine manure as a fertilizer reduces waste and cuts down on the cost of synthetic fertilizers.

**Trying to Not Raise a Stink (video):** Experts are studying manure microbiology and diet to cut odors.

**Food Science and Safety News**

**Food Labels:** As more people consider where their food comes from, some companies are including "carbon footprint labels." Note: Check out this CAST Issue Paper about the process labeling of food.

**Heart-healthy Diet:** Researchers found that consuming lean, unprocessed red meat as part of a heart-healthy diet is just as
Inflight meals have changed (they're in color now!), and this story looks behind the scenes.

University of Missouri researchers are using drought simulators known as rainout shelters to address the potential decline in plant production and growth.

*Food Safety:* The FDA uses import alerts to enforce U.S. food safety regulations for food from foreign countries. The agency updates and modifies the alerts as needed.

*Appealing to Consumers:* The largest grocer in the United States says it will renovate produce areas with signs highlighting prices and shorter merchandise bins to create an "open-market feel" for customers.

*Meaty Confusion:* A recent survey shows that many consumers do not understand that the labeling term "plant-based beef" was intended to describe an entirely vegetarian or vegan food product.

*Pumpin’ It For Your Health:* Yet again, researchers say studies show that exercise is "protective against overeating."

*Dinner for 7.8 Billion:* The University of Florida's Jack Payne and two other experts explain how food production can help fight climate change.

### Plant Agriculture and Environmental News

*Where There's Smoke:* UC-Davis researchers find that wildfires and smoke exposure are recognized by farmworkers and employers as a growing safety concern, but they differ on how to address the problem.

*Herbicide Research:* Bayer Crop Science announced it is developing a new herbicide molecule, the first post-emergence product for broad acre weed control in 30 years.

*Biodiesel and Ag (video):* This clip looks at the many ways biodiesel and agriculture are linked.

*Measuring Nitrogen:* Researchers from Penn State University report about a new method for measuring cover crop nitrogen, using a handheld optical sensor.

*Halting Pesticide Production:* Corteva AgriScience says it will stop making chlorpyrifos insecticide.

*EPA Herbicide Ruling:* The EPA says its regulatory review found that glyphosate is not a carcinogen.

*It Isn’t Easy Being Green:* The agriculture industry is dealing with concerns about water quality and Lake Erie algae blooms. Some farmers are trying to be a part of the solution.

*Medicinal Algae?* Researchers hope algae can improve human gastrointestinal problems.

### International News

*Who’s a Good Robot? (video):* Spot the robotic dog is employed by a Norwegian oil company to run inspections, detect leaks, gather data, and generate reports.

*Factose Intolerance:* This New Zealand farmer uses the term "factose intolerance" to describe the "convenient
In Scotland, Edinburgh University students voted to reject a ban of beef products from campus bars and cafes.

Nearly 3,000 pooches received grooming, polishing, and styling as they battled to be top dog.

Poultry Practices: Dutch authorities have changed the method of controlling salmonella in certain poultry farms after pressure from the European Commission.

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Related links at upper left.

General Interest News

Best in Show Vet Care: Cornell University specialists were the official veterinary care providers at the Westminster Kennel Club Dog Show in New York City.

Top Dogs (videos and photos): The Westminster Dog Show produced impressive award winners, including a standard poodle that took top prize.

Advancing Agriculture: Farmers and ag researchers are diverse and creative. Check out these seven contributions of Black Farmers to agriculture.

Cheers: A Montana town is saving money by the way it uses brewery "beer waste" in its water treatment facility.

Rural Research: This 655-acre Mississippi State research facility is one of sixteen experiment stations chosen to represent the primary soil types and climates across the state.

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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