



Newsletter ALFA #17 - July 2015

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Foreword

The month of July is ideal for celebration. France and the United States both celebrate liberty and freedom during this month. Yet, the scientific achievements of this month should also be celebrated. The month of scientists made breakthrough research involving biofuels while the private sector related headway in precision agriculture.

In the highlights of this month, we wanted to stress the importance Cuba entering the United States economic market and the discovery of LEDs to nourish plant lights. Both these subjects are fairly new, but they have and will continue to strongly impact the future of scientific research.

Hope you'll enjoy these news as much as we loved finding them for you!

Enjoy your reading!

Marc Rousset, Scientific attaché

Simon Ritz, Deputy Scientific attaché

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Highlights

Cuba's Food Potential - July 3

The United States and Cuba are at the cusp of recommencing a trade agreement. This leads to great optimism for American agricultural exporters as Cuba is the largest island in the Caribbean. [View more \(Read more\)](#)

Targeted LEDs could provide efficient lighting for plants grown in space - July 1

A new study shows that targeting plants with red and blue LEDs provides energy-efficient lighting in contained environments, a finding that could advance the development of crop-growth modules for space exploration. [Read more](#)



Agriculture

2^{in the US}2

Study: Groundwater from aquifers important factor in food security - July 7

Thirsty cities, fields and livestock drink deeply from aquifers, natural sources of groundwater. But a study of three of the most-tapped aquifers in the United States shows that overdrawn from these resources could lead to difficult choices affecting not only domestic food security but also international markets. [Read more](#)

World Food Costs Extend Slide to Five-Year Low as Dairy Tumbles - July 9

Global food prices extended a slide to a five-year low last month as dairy prices tumbled, the UN's Food & Agriculture Organization reported. [Read more](#)

Probiotics - for plants - July 8

Recent research (and commercials) tell us probiotic products are good for our health, with benefits ranging from improved digestion to managing allergies and colds, Just as humans can benefit from the good bacteria of probiotics, plants can benefit from certain microbes. And that benefit is also good for the environment. [Read](#)

more

[Charcoaling manure, greening neighborhoods in Chesapeake Bay watershed - July 1](#)

Chesapeake Bay bears a heavy pollution burden from the growing metropolitan centers and vibrant agricultural activity in the watershed. Nitrogen and phosphorus draining from farm fields, livestock manure, sewage treatment plants, industry, and car exhaust are powerful fertilizers that feed blooms of algae in the bay. Sudden population explosions of algae pull oxygen from the water in the bay and change its acidity, which stresses aquatic animals and can even lead to "dead zones" empty of economically valuable fish and shellfish. [Read more](#)

[Climate Corp: We've Mapped Nearly 45% Of U.S. Corn and Soybeans- Jun. 25](#)

Today, The Climate Corporation, a division of Monsanto Company, announced that farmers have mapped more than 75 million row crop acres in their digital agriculture platform, up from 50 million acres in 2014. This significant acre adoption represents nearly 45% of all corn and soybean acres planted in the U.S. The company's digital agriculture platform includes Climate Basic, Climate Pro and FieldView from Precision Planting. The company also announced Climate Pro, their premium web and mobile product offering, has grown considerably from its initial launch from 1 million acres last year to more than 5 million acres this year across the U.S. [Read more](#)

2 In France 2

[The conservative party demands an emergency agricultural plan- July 7](#)

Christian Jaboc, the president of the French Republican Party and former leader in the agricultural union asked this Tuesday to Prime Minister Manuel Valls to put in place an emergency plan addressing French agriculture. [Read more \(in French\)](#)



Low-carbon energies

2 In the US 2

[Scientists study ways to integrate biofuels, food crops on farms - July 7](#)

Planting bioenergy crops like willows or switchgrass in rows where commodity crops are having difficulty growing could both provide biomass feedstock and also limit the runoff of nitrogen fertilizer into waterways — all without hurting a farmer's profits. [Read more](#)

[Scientists hit the sweet spot on sugar conversion for biofuels - Jun. 16](#)

Lignocellulosic biomass has the potential to be used for biofuel production, but the abundance of lignin and hemicelluloses presents a hurdle as these types of sugars are difficult to convert into biofuels. [Read more](#)

[Company to develop \\$175 million waste-to-diesel plant in Florida - July 6](#)

BioPower Operations Corp. has announced that its wholly owned subsidiary Green3Power Operations Inc. (G3P) has won an award to build a \$175 million renewable energy facility that will convert waste into ultra-low sulfur synthetic green No. 2 diesel fuel using G3P's exclusively licensed gasification technology and the Fischer-Tropsch process, which has been in use for 90 years turning gas into fuel. The facility will be built at the existing St. Lucie County Solid Waste Management Facility in Florida, and extend the life of the landfill while reducing environmentally harmful greenhouse gas emissions. [Read more](#)

Bioethanol technology validated at Berkeley Lab - Jun. 26

Microvi Biotechnologies, an innovator of biocatalytic processes, working with the Advanced Biofuels Process Demonstration Unit (ABPDU) at the Lawrence Berkeley National Laboratory (Berkeley Lab), has demonstrated improvements to biological ethanol production. [Read more](#)

Unlocking fermentation secrets open the door to new biofuels - Jun. 28

Researchers from the University of Illinois at Urbana-Champaign have, for the first time, uncovered the complex interdependence and orchestration of metabolic reactions, gene regulation, and environmental cues of clostridial metabolism, providing new insights for advanced biofuel development. [Read more](#)

2 in France 2

Ségolène Royal and Stéphane Le Foll commenced a project on the development of advanced biofuels to be used aeronautically - Jun. 19

At the salon of Bourget, Ségolène Royal announced with Stéphane Le Foll a new jurisdiction for the General Council of Environment and Renewable Energy (CGEDD), and the General Council of Nutrition, Agriculture, and Rural Land (CGAAER) so that they could establish recommendations concerning the production and the utilization of advanced biofuels to be used aeronautically. [Read more \(In French\)](#)



Food Sciences

2 in the US 2

Waiting to harvest after a rain enhances food safety - July. 3

To protect consumers from foodborne illness, produce farmers should wait 24 hours after a rain or irrigating their fields to harvest crops, experts say. Rain or irrigation creates soil conditions that are more hospitable to *Listeria monocytogenes*, which when ingested may cause the human illness Listeriosis. Waiting to harvest crops reduces the risk of exposure to the pathogen, which could land on fresh produce. [Read more](#)

High fat diet changes gut microbe populations and brain's ability to recognize fullness - July 7

Have you ever wondered why eating one good-tasting French fry may lead you to eat the whole batch and leave you wanting more? [Read more](#)

FDA takes step to remove artificial trans fats in processed foods - Jun. 16

Action expected to prevent thousands of fatal heart attacks. Based on a thorough review of the scientific evidence, the U.S. Food and Drug Administration finalized its determination that partially hydrogenated oils (PHOs), the primary dietary source of artificial trans fat in processed foods, are not "generally recognized as safe" or GRAS for use in human food. Food manufacturers will have three years to remove PHOs from products. [Read more](#)

Digesting bread and pasta can release biologically active molecules - July. 2

Biologically active molecules released by digesting bread and pasta can survive digestion and potentially pass through the gut lining, suggests new research. The study reveals the molecules released when real samples of bread and pasta are digested, providing new information for research into gluten sensitivity. [Read more](#)

Consumers understand supplements help fill nutrient gaps, new survey shows - July 1

The vast majority of consumers recognize that multivitamins, calcium and/or vitamin D supplements can help

fill nutrient gaps but should not be viewed as replacements for a healthy diet, according to a new survey conducted on behalf of the Council for Responsible Nutrition (CRN). Conclusions from the survey of more than 2,000 U.S. adults were published in Nutrition Journal in a peer-reviewed article titled, "Consumer attitudes about the role of multivitamins and other dietary supplements: report of a survey," authored by CRN consultant Annette Dickinson, Ph.D.; Douglas (Duffy) MacKay, N.D., senior vice president, scientific & regulatory affairs, CRN; and Andrea Wong, Ph.D., vice president, scientific & regulatory affairs, CRN. [Read more](#)

2 *In France* 2

[Death of agricultural worker due to pesticides: Investigation started - July 7](#)

In the town of Libourne an Agricultural worker died of cancer after having used arsenic sodium, a pesticide for about ten years. His daughter raised the issue against X at the end of April stating, "it is time to break the silences concerning the question of pesticides." [Read more \(in French\)](#)

Guest News

[Urban Agriculture in Chicago - July 2015](#)

Chicago is known for its signature skyline, deep-dish pizza and the 'L'. But amongst the hustle and bustle of this metropolis are plots of urban gardens, adding a bit of greenery to the steel and concrete of the city. A multitude of organizations are helping cultivate these gardens and farms which not only distribute fresh produce but also create new jobs for its surrounding residents. [Read more](#)

Send us your ALFA news for September's Newsletter [here!](#)

Seen on the web

[Why Cows and Fireworks Don't Mix - July 4](#)

Across the country, these local papers are giving fair warning to would-be pyrotechnicians about the dangers of setting off fireworks too close to livestock. It isn't that surprising when you think about it. Western movies have often relied on a well timed thunder clap to send cattle into a stampede and household pets may bolt at the sound of fireworks. [Read more](#)

[How a Founding Father and a British Agriculturist Helped America's Farmers - July 4](#)

George Washington believed his young nation was only as strong as its farmers, so less than two years after the end of hostilities with England in 1783, he turned to that country's best and brightest for help in improving his own, and America's, agricultural practices. [Read more](#)

Structure of the month

[Technical Institute for Organic Agriculture](#)

Created in 1982, the Research Institute of Organic Agriculture is an professionally managed organization dedicated to the national coordination of research and experimentation in organic agriculture. The institute brings together field experts, researchers and professionals to produce technical references on the organic production methods, useful to organic and conventional farmers.

[Read more](#)

Get in touch with ALFA sciences

2 *New Articles* 2

<http://www.bulletins-electroniques.com/> : News from the United States covering advancements in science and technology (French articles).

• *For France information*

Research centers

<http://www.anses.fr/> : A vast source of information encompassing the fields of human health, animal health, and plant health.

<http://www.cnrs.fr/index.php> : Access new frontiers of Science through CNRS, the largest research organization in all of Europe.

<http://www.international.inra.fr/> : Learn more from Europe's leading agricultural research institution.

<http://www.agence-nationale-recherche.fr/en/> : Discover a multitude of ongoing projects in a variety of scientific fields.

<https://crnl.univ-lyon1.fr/index.php/en> : Learn more about the future movements of neuroscience.

Information centers

<http://www.bulletins-electroniques.com/> : News from France on advancements in science and technology (French articles).

<http://agriculture.gouv.fr/> : Discover information and the direction of French Agriculture

<http://www.frenchfoodintheus.org/> : An in depth discovery of French food and France's agricultural economy.

<http://agfundernews.com> : News and events concerning Agtech and investment within the agricultural sector.

2 Coming Events 2

Event	Place	City	Date
The Info Agricultural Conference	Union Station	St. Louis, Missouri	July 28-30
2015 International Grain Quality and Food Security Conference	Kansas State University	Manhattan, Kansas	August 3-6
Ag Transportation Summit	The Westin O'Hare	Rosemont, Illinois	August 4-5
Farm Progress Show	Decatur, Illinois	September 3-3	
International Agronomy Day	University of Illinois	Champagne, Illinois	August 31

French Office for Science and Technology at the Embassy of France in Washington, DC - website: www.france-science.org

Consulate General of France in Chicago - website: www.consulfrance-chicago.org

We value your feedback. Please send us your comments and suggestions at deputy-agro.mst@consulfrance-chicago.org

