

CAST[®] *FRIDAY NOTES*

The Science Source for Food,
Agricultural, and Environmental Issues

weekly e-newsletter



*The Council for Agricultural Science and Technology
Communicating Credible Science to "A World Supported by Plants and Animals"*

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Friday Notes will not be published next week (July 3) because of the Independence Day holiday. The Notes will resume their regular schedule on Friday, July 10.



June 26, 2009

**Agriculture May Be As American As
Apple Pie, But It's Getting to Be a
Smaller and Smaller Slice**



Agriculture in America: Then and Now

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Americans celebrating Independence Day or Thanksgiving wouldn't have much to celebrate about--or to celebrate with--without agriculture. But food, clothing, and clean water don't just come out of thin air (although agriculture has some good solutions for that, too). Creating, adapting, and maintaining critical agricultural technologies and production require serious priority-setting and long-term commitments to research and development. No matter which side of the many agricultural advocacy fences we're standing on, we're all standing on a world supported by plants and animals. It's part of our heritage and will determine our future.

Long before the Second Continental Congress signed the "Declaration of Independence," Native Americans were developing and expanding agricultural practices. It is estimated that between one-half and three-fifths of all the world's crops now in cultivation were first domesticated by Native Americans. They hybridized corn; developed a process for reducing plant loss to insects; established water conservation practices; and domesticated several animals, insects, and birds. [Based on information from the USDA-FAS; Photo courtesy of the Library of Congress]



Centuries later, when the Pilgrims anchored off the coast of what is now Provincetown, Massachusetts, it was the "lay of the land"--and water--that guided their eventual choice of Plymouth for a New

World home. And even after a harrowing first winter in which more than half the original Mayflower passengers and crew died, the Pilgrims were determined to stay. When spring 1621 finally arrived, their first order of business was to dig up the ground and plant seeds they had brought from England. [Painting above, *Mayflower in Plymouth Harbor* by William Halsall, 1882, public domain]

The American Revolution itself was connected in many ways to agriculture, partly from British mercantilist regulations, including requirements that the colonies ship certain commodities such as tobacco only to England, and that the English have a monopoly of the American market on certain foodstuffs such as tea. During the Revolutionary War, agriculture helped to feed the American forces, and in the Continental Congress....U.S. commodity exports [were] a major lever in building alliances with other nations. [Based on information from *The Oxford Companion to American Military History*, J. W. Chambers et al. (eds.), Oxford University Press, 2000.]

With a legacy like that, the United States should be actively and generously supporting agricultural research and development, right?

"Agriculture is more than ever a knowledge-driven industry," says G. Philip Robertson, American Association for the Advancement of Science." Advances in genetics, in field crop

technology, in animal health, in food storage and processing, in pest protection and forest health--advances at all stages of the production chain--are driven largely by research

findings." [Based on information from the American Institute of Biological Sciences "Comments on USDA Agricultural Research Roadmap," letter to USDA Under Secretary Rajiv Shah, May 29, 2009; Photo courtesy of the Agricultural Research Service Image Gallery]



Increased research in agriculture is crucial for economic recovery and development in the nation and in the world. Research is the source of new knowledge important for increased food production, for meeting the increasing demands for animal-based protein, for therapeutics, for human health and food security, and for biosecurity and renewable fuels. [From the National Agricultural Research, Extension, Education and Economics (NAREEE) Advisory Board, "Relevancy and Adequacy of Funding Report," April 21, 2009]

FISCAL 2010

President's proposal shows solid support for R&D

\$ MILLIONS	2009-10 STIMULUS ^a	BUDGET			CHANGE 2009-10
		2008 ^b	2009 ^c	2010 ^d	
Defense	\$300	\$80,278	\$81,616	\$79,687	-2.4%
Health & Human Services	11,103	29,265	30,415	30,936	1.7
NASA	925	11,182	10,401	11,439	10.0
Energy	2,446	9,807	10,621	10,740	1.1
NSF	2,900	4,580	4,857	5,312	9.4
Agriculture	176	2,336	2,421	2,272	-6.2
Commerce	411	1,160	1,292	1,330	2.9
Homeland Security	0	995	1,096	1,125	2.6
EPA	0	551	580	619	6.7
Other	74	3,592	3,766	4,160	10.5
TOTAL	\$18,335	\$143,746	\$147,065	\$147,620	0.4%

a Money supplied in American Recovery & Reinvestment Act. **b** Actual. **c** Estimated. **d** Proposed. **SOURCE:** Office of Management & Budget

[Information in above table courtesy of the Office of Management and Budget via *Chemical and Engineering News*, accessed June 25, 2009]

Although proposed federal funding for science overall is up for 2010, those increases are predominantly directed to the National Institutes of Health, the Department of Energy, and the Department of Defense. In both the 2009-2010 American Recovery and Reinvestment Act (Stimulus Package) and in the proposed 2010 budget, agriculture takes a back seat. But in reality, government budget allocations for 2010 suggest we're not "putting our money where our mouths are," and this portends serious consequences for every citizen. Agricultural scientists are tasked not only with solving today's challenges,

but also with coming up with solutions to possible challenges of the future. Their knowledge and expertise can't be called for in a crisis when no investment has been made in preparation. Allen Levine, Dean of the College of Food, Agricultural and Natural Resource Sciences at the University of Minnesota, notes:

"In the blizzard of new research funding created by the federal stimulus bill, an important science was omitted: Agriculture. While \$10 billion was included for the National Institutes of Health, \$3 billion for the National Science Foundation, and \$2 billion for the Energy Department, not a penny was dedicated for competitive research in the U.S. Department of Agriculture. That's unfortunate. Agricultural science will help us find the answers to some of our greatest problems: Food safety, scarcity, and cost; water quality and availability; the need for healthy soil and plants to grow food; and sustainable energy. While some of the new federal funding will find its way to agriculture-related issues...designating federal dollars to agriculture would have sent an important message." [Excerpted from "The Art and Science of Agriculture," *The Washington Times*, April 8, 2009]

Perhaps Kelly Kohler--a 10th grader from Redwood Falls, Minnesota--sums it up best in her winning 2009 National Ag Day essay: "These days, agriculture is so deeply rooted in society that it is taken for granted and often ignored....

Agriculture is everywhere, even though society

seems to have forgotten; it surrounds the countryside, cities, and everyone in them. The agricultural industry is one of the most important industries in the world today. A world without agriculture is a world without life." [Text excerpt courtesy of the Agriculture Council of America; Photo courtesy of the U.S. Conservation and Natural Resources Service]



Communicating accurate, timely, science-based information without motive or agenda has been the mission of the Council for Agricultural Science and Technology (CAST) since its beginning in 1973. CAST's first publication--*Agricultural Policy and the Public*, written by Norman Borlaug--focused on the same ongoing critical need for objective, scientific information we face today. The unique challenges of the 21st century demand that legislators, regulators, policymakers, the media, the private sector, and the public "have the facts" as they make decisions that will impact individuals, communities, the nation, and the world.

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