

Food Scarcity and Prices Likely to Rise Without Infusion of Ag Research Dollars, Economists Predict

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Food around the world is likely to become scarcer and more expensive if the United States and other developing countries don't bolster their investment in agricultural research, warns a team of economists from the University of California, Davis, and the University of Minnesota.

In a Policy Forum paper published this month in the journal *Science*, the researchers documented a slowdown since 1990 in the growth rate of general agricultural productivity and in the growth rates of yields of specific crops including corn, rice, wheat and soybeans -- the world's major food and feed crops.

"The long-term consequences of a continuing slowdown in agricultural productivity growth could be dire, with more than one billion people around the world already suffering from malnutrition," said UC Davis agricultural economist Julian Alston, an authority on the economic impact of government policy on agriculture.

"It is critical that the United States and other developing countries revitalize their investments in agricultural research and development, which has been the main driver of long-term growth in agricultural productivity," he said.

Alston and his colleagues, Philip Pardey and Jason Beddow of the University of Minnesota, noted that a number of factors -- including climate change, land degradation, shifts to less productive areas, higher resource costs, evolving pests and diseases, and changes in governmental policies -- have all contributed to the slowdown in agricultural productivity growth.

"But part of the slowdown in productivity growth must be blamed on a slowdown in the growth rate of public and private investment in agricultural research and development, combined with a shift in research emphasis," Alston noted.

Some research and development funds that were allocated for agriculture in recent decades have been redirected from productivity and toward improving food safety and product quality as well as to medical, energy and industrial uses of agricultural commodities, according to the researchers.

"Research and development have helped maintain yields as new pests, diseases and other environmental problems arise," Alston said. "And development of new knowledge and technology has historically resulted in more abundant supplies of food at more affordable prices.

"Typically, such investments have benefited industrialized countries as well as

developing nations, where more efficient agricultural systems can help alleviate hunger and poverty and reduce pressure on natural resources," he said.

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Media contact(s):

- Julian Alston, UC Davis Agricultural and Resource Economics, (530) 752-3283, julian@primal.ucdavis.edu
- Philip Pardey, Univ. of Minnesota Applied Economics, (612) 625-2766, ppardey@umn.edu
- Pat Bailey, UC Davis News Service, (530) 752-9843, pjbailey@ucdavis.edu

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