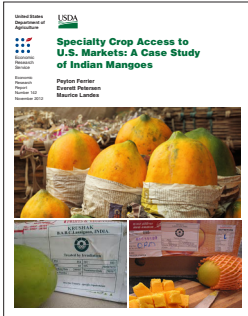


ERS *Report Summary*

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Specialty Crop Access to U.S. Markets: A Case Study of Indian Mangoes

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What Is the Issue?

Certain specialty crops produced in other countries, such as Indian mangoes, have gained greater access to U.S. markets since 2007, when USDA's Animal and Plant Health Inspection Service changed its regulatory protocols for ensuring goods are free of pests. One treatment option considered under the 2007 protocols as an effective quarantine measure for neutralizing nearly all insect pests is irradiation. Using the example of U.S. imports of Indian mangoes, we examine the role of irradiation in mitigating pest risks from imported fresh produce; the costs associated with treating, shipping, and marketing fresh produce imports in the U.S. market; and the resulting levels of prices and availability of Indian mangoes for U.S. consumers. (For more information on 2007 regulatory changes, see: http://www.aphis.usda.gov/import_export/plants/plant_imports/index.shtml.)

What Did the Study Find?

Increased access of foreign fresh produce to the U.S. market, facilitated by risk-mitigation options such as irradiation, can improve U.S. consumer welfare. While increased variety and availability of goods are likely to benefit consumers, the size of these benefits depends on whether these goods are able to capture a substantial market share. In the case of U.S. imports of Indian mangoes, India's share of the U.S. market remains small and dependent on the apparent willingness of some consumers to pay high prices for India's mango varieties relative to competing varieties from larger exporters, such as Mexico. Our findings indicate that these high prices arise primarily from transportation costs and high wholesale margins and not from the regulatory or treatment costs.

- Irradiation, a postharvest treatment that neutralizes a wide range of pests, can facilitate access to the U.S. market for fresh produce that may not be able to meet U.S. regulatory requirements by other means. The costs of irradiation are likely to fall if the treatment becomes more commonly used.
- Irradiation and other regulatory compliance costs appear to be low relative to other logistical and marketing costs for fresh produce accessing the U.S. market. Innovation and increased scale that reduce transportation costs and wholesale margins are likely to yield greater gains in imports and result in more imported produce being available to U.S. consumers than are reductions in irradiation costs.

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- While the benefits to U.S. consumers of improved availability and lower costs associated with an individual niche product, such as Indian mangoes, may be small, the cumulative gain to U.S. consumers from improved access to a broad range of specialty crops likely would be substantially greater.

How Was the Study Conducted?

This study uses a partial equilibrium model of the U.S. and Indian mango markets to estimate the value of increased imports of Indian mangoes arising from changes in costs associated with irradiation treatment, shipping, and wholesale margins. Demand is modeled using a constant elasticity of substitution utility framework, calibrated with trade and price data from USDA's Foreign Agricultural Service and Agricultural Marketing Service, as well as from the U.S. Department of Commerce's Bureau of Economic Analysis and Census Bureau. Costs are modeled using detailed wholesale and retail data provided by the Indian Ministry of Agriculture's Agricultural Marketing Information Network (Agmarknet), as well as cost information obtained through interviews with Indian traders.