

Title Generic irradiation quarantine treatments: The next steps
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Abstract

In 2006, USDA-APHIS published a landmark rule providing generic irradiation quarantine treatments. The rule approved irradiation doses of 150 Gy for any tephritid fruit fly and 400 Gy for all other insects except the pupa and adult stages of Lepidoptera. Therefore, if a pest risk assessment demonstrates that no pupae or adult Lepidoptera are associated with the commodity, export approval can be forthcoming with no further research. The generic irradiation treatments apply to all fresh horticultural commodities. We discuss three areas of future irradiation research in light of the new generic treatments including: (1) development of generic doses below 400 Gy for other insect groups of quarantine importance such as scales and mealybugs; (2) reduction of doses for specific commodities to shorten treatment time and minimize any negative effects of irradiation treatment on quality; and (3) demonstration that boxes of mixed fruits can be treated while meeting dosing requirements. Hawaii has been exporting fruits and vegetables to the U.S. mainland using irradiation since 2000. India recently began exporting mangoes to the U.S using irradiation, becoming the first country to use the newly-approved generic doses.