

Research Overview for Phytosanitary Irradiation

Andrea L. Beam; Md-Sajedul Islam, and Woodward D. Bailey
USDA-APHIS-PPQ

Phytosanitary Irradiation (PI) is an excellent alternative to methyl bromide fumigation, and its use is gaining in popularity. PI has several advantages as a commodity treatment over traditional treatment methods. In addition to being a methyl bromide alternative, it is effective for many types of pests, has minimal effect on fresh commodity quality, and can be applied at diverse points post-harvest. APHIS has approved a generic irradiation treatment dose that can be applied to all fresh commodities and all insect pests (except for Lepidoptera adults/pupae). Therefore, PI is useful for a variety of import, export and domestic applications. To increase adoption of this treatment technology, several research projects are underway nationally and internationally. These projects fall into the broad categories of dose development, commodity quality assessment after irradiation, and removing barriers to the use of PI. Recent developments, current research projects, and research needs will be discussed for each of these categories.