

These recommendations were developed based on research by G.J. Hallman<sup>1</sup> and the research summarized in the International Atomic Energy Agency's International Database on Insect Disinfestation and Sterilization.<sup>2</sup>

In addition, preliminary research conducted by the USDA's Agricultural Research Service on the sweetpotato scarabee and the sweetpotato stem borer indicates that irradiating sweetpotatoes with a dose of 400 Gy (40 krad) kills all of these pests if they are present in the sweetpotatoes. According to this research, a dose of 200 Gy (20 krad) is sufficient to stop reproduction in these pests. Given this information and the fact that 400 Gy is at the top of the range of minimum doses the IPPC recommends for neutralizing pests in the family that contains the ginger weevil, we believe that the minimum dose of 400 Gy (40 krad) that we are requiring is a conservative minimum requirement that will neutralize all three of these pests.

While the quality of some other commodities might be affected by irradiation at 400 Gy (40 krad), the sweetpotato grown in Hawaii has been shown to tolerate this dose. The minimum dose of 400 Gy (40 krad) required by this rule falls well below the maximum dose of 1,000 Gy (100 krad) specified by the Food and Drug Administration regulations that address the safety of irradiated foods.<sup>3</sup> There are no commodity or food safety concerns associated with requiring that Hawaii-grown sweetpotatoes be irradiated with a dose of 400 Gy (40 krad).

The other two pests identified in the 2002 risk assessment, the gray pineapple mealybug and the Kona coffee root-knot nematode, are external pests. We believe they can be effectively detected by visual inspection, and we are requiring such visual inspection as a condition of the interstate movement of sweetpotato from Hawaii. This is consistent with the recommendations of the pest risk assessment mentioned above.

The regulations in "Subpart—Hawaiian Fruits and Vegetables" in part 318 (§§ 318.13—318.13-17) already provide for the use of irradiation to treat a variety of other commodities from Hawaii. The irradiation provisions in § 318.13-4f allow abiu, atemoya, bell peppers, carambola, eggplant, litchi,

longan, mangoes, papaya, pineapple (other than smooth Cayenne), rambutan, sapodilla, Italian squash, and tomatoes to be moved interstate from Hawaii if, among other things, the fruits and vegetables undergo irradiation treatment in accordance with that section. The section's provisions for irradiation treatment include minimum dosage requirements, requirements for approved facilities, treatment monitoring requirements, packaging standards, and movement restrictions. (The irradiation facility in Hawaii that presently treats other fruit for which irradiation is an approved treatment as a condition of interstate movement from Hawaii satisfies all these requirements and has already been approved by APHIS.)

Because these regulations in § 318.13-4f are already in place, and because we have determined that sweetpotatoes should be treated, handled, and certified for movement under the same conditions described in that section, we are adding sweetpotatoes to the list of fruits and vegetables that may be treated with irradiation as a condition of interstate movement from Hawaii in § 318.13-4f(a). This will eliminate the need to establish what would be essentially the same provisions in § 318.30. We will, however, amend § 318.30 to provide that irradiation in accordance with § 318.13-4f may be used to qualify sweetpotatoes from Hawaii for interstate movement. We intend, in a future rulemaking, to revise the regulations in the sweetpotato subpart and perhaps disperse the provisions of the subpart into the subparts governing movement of fruits and vegetables from Hawaii and from Puerto Rico or the U.S. Virgin Islands, respectively.

The regulations in § 318.13-4f do not generally provide that fruits and vegetables treated in accordance with that section must also be inspected as a condition of interstate movement. However, the regulations in § 318.13-4f(b)(7) provide that litchi must be inspected and found free of the litchi fruit moth and other plant pests prior to treatment in Hawaii or movement to the mainland for treatment. Because, as noted above, sweetpotatoes moved interstate from Hawaii must be visually inspected to ensure that they are free of the gray pineapple mealybug and the Kona coffee root-knot nematode, we are adding an inspection provision for sweetpotatoes similar to that for litchi. Specifically, we are amending § 318.13-4f(b)(7)(i) to indicate that, to be eligible for a certificate for interstate movement, sweetpotatoes to be treated in Hawaii in accordance with § 318.13-4f must be

found by an inspector to be free of the gray pineapple mealybug and the Kona coffee root-knot nematode by an inspector before undergoing irradiation treatment in Hawaii. We are also amending § 318.13-4f(b)(7)(ii) to indicate that, to be eligible for a limited permit for the interstate movement of untreated sweetpotatoes from Hawaii for treatment on the mainland United States, sweetpotatoes from Hawaii must be inspected in Hawaii and found to be free of the gray pineapple mealybug and the Kona coffee root-knot nematode by an inspector.

The addition of sweetpotatoes to the regulations in § 318.13-4f that govern irradiation of fruits and vegetables moved interstate from Hawaii also necessitates three minor changes to those regulations:

- The title of the table in § 318.13-4f has read "Irradiation for Fruit Flies and Seed Weevils in Hawaiian Fruits and Vegetables." We are revising this title to read, more generically, "Irradiation for Plant Pests in Hawaiian Fruits and Vegetables."

- The heading of the left-hand column in that table has read "Fruit." We are revising this heading to read, more generically, "Commodity."

- Paragraph § 318.13-4f has stated that treatment in accordance with § 318.13-4f is approved to assure quarantine security against the Trifly complex. We are amending this paragraph to indicate that the treatment is approved to treat other plant pests as well.

This interim rule gives Hawaiian producers and exporters of sweetpotatoes who wish to move their products interstate an additional treatment option while continuing to protect against the introduction of plant pests associated with Hawaiian sweetpotato into other States.

#### Immediate Action

This rule provides for the use of irradiation to treat sweetpotatoes moving interstate from Hawaii. Immediate action is warranted to alleviate the negative economic effects that Hawaiian growers and shippers face as a result of the fact that our regulations previously only allowed fumigation as an acceptable treatment for Hawaiian sweetpotatoes moved interstate. Fumigation facilities are unavailable on some islands in Hawaii on which sweetpotatoes are grown, and producers of sweetpotatoes on those islands must pay additional transportation costs for treatment before moving their sweetpotatoes interstate. Because a more accessible irradiation facility that provides phytosanitary

<sup>1</sup> See "Irradiation as a quarantine treatment," in *Food Irradiation Principles and Applications*, Molins, R.A. (ed.). New York: J. Wiley & Sons, 2001, p. 113-130, and "Expanding radiation quarantine treatments beyond fruit flies," *Agricultural and Forest Entomology* 2:85-95, 2000.

<sup>2</sup> Available at <http://www-ididas.iaea.org>.

<sup>3</sup> See 21 CFR part 179.