

From: Matthew Blevins
To: Roberto Torres
Date: 08/23/2006 12:46:08 PM
Subject: Fwd: Economic data for Hawaii

FYI, for project file.

>>> <GrayStarNJ@aol.com> 08/23/2006 10:37 AM >>>
Matt,

Per your request:

Attached are some documents that have economic data for the use of irradiation in Hawaii.

Also, please see: <http://www.ars.usda.gov/is/np/mba/jan96/wong.htm?pf=1>

These documents should be a good start for you economic review.

I hope this facilitates your efforts.

Russell

Russell N. Stein
GRAY*STAR, Inc.

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Subject: Fwd: Economic data for Hawaii
Creation Date 08/23/2006 12:45:11 PM
From: Matthew Blevins
Created By: MXB6@nrc.gov

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TEXT.htm	1147	
012706.ZIP	208782	08/23/2006 1:43:20 PM

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Rules and Regulations

Federal Register

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Friday, January 27, 2006

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Parts 301, 305, 318, and 319

[Docket No. 03–077–2]

Treatments for Fruits and Vegetables

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are amending the regulations by revising the approved doses for irradiation treatment of imported fruits and vegetables. This rule will establish a new minimum generic dose of irradiation for most plant pests of the class *Insecta*, establish a new minimum generic dose for the fruit fly family, reduce the minimum dose of irradiation for some specific fruit fly species, add 10 pests to the list of pests for which irradiation is an approved treatment at less than the generic dose, and provide for the use of irradiation as a treatment for cut flowers and foliage. These actions will allow the use of irradiation to neutralize more pests and to neutralize some pests at lower doses. Furthermore, we are providing for the irradiation of fruits and vegetables moved interstate from Hawaii at the pest-specific irradiation doses that are now approved for imported fruits and vegetables. We are also providing for the use of irradiation to treat fruits and vegetables moved interstate from Puerto Rico and the U.S. Virgin Islands. These actions will allow irradiation to serve as an alternative to other approved treatments for additional commodities moved interstate from Hawaii, Puerto Rico, and the U.S. Virgin Islands. Finally, we are adding irradiation as a treatment for bananas from Hawaii and adding vapor-heat treatment as an optional treatment for sweetpotatoes from Hawaii. These actions will provide

an alternative to the currently approved treatments for those commodities while continuing to provide protection against the spread of plant pests from Hawaii into the continental United States.

EFFECTIVE DATE: February 27, 2006.

FOR FURTHER INFORMATION CONTACT: Dr. Inder P.S. Gadh, Senior Risk Manager, Commodity Import Analysis & Operations, PPQ, APHIS, 4700 River Road Unit 133, Riverdale, MD 20737–1236; (301) 734–8758.

SUPPLEMENTARY INFORMATION:

Background

The phytosanitary treatments regulations contained in 7 CFR part 305 set out standards and schedules for treatments required in 7 CFR parts 301, 318, and 319 for fruits, vegetables, and other articles to prevent the introduction or dissemination of plant pests or noxious weeds into or through the United States. Within 7 CFR part 305, the irradiation treatments subpart (§§ 305.31 through 305.34, referred to below as the regulations) sets out standards and minimum doses for irradiation treatment for imported fruits and vegetables and for regulated articles moved interstate from quarantined areas within the United States, along with other requirements for performing irradiation treatments.

On June 10, 2005, we published in the **Federal Register** (70 FR 33857–33873, Docket No. 03–077–1) a proposal to amend the regulations by making several amendments to the irradiation treatment regulations for imported fruits and vegetables, for fruits and vegetables moved interstate from Hawaii, Puerto Rico, and the U.S. Virgin Islands, and for regulated articles moved interstate from areas quarantined for Mexican fruit fly or Mediterranean fruit fly. We also proposed to provide for the use of irradiation treatment for bananas moved interstate from Hawaii and to provide for the use of a vapor heat treatment for sweetpotatoes moved interstate from Hawaii.

On June 20, 2005, the **Federal Register** published a correction (70 FR 35500) to the table in § 305.31(a) of our proposal in which the generic dose for all pests of the phylum *Arthropoda*, excluding adults and pupae of the order *Lepidoptera*, was corrected to read 400 gray.

We solicited comments concerning our proposal for 60 days ending August

9, 2005. We received 13 comments by that date. They were from producers, researchers, representatives of State and foreign agricultural departments, an international industry organization, a public interest organization, and a private citizen. The comments are discussed below by topic.

Issue Outside the Scope of APHIS' Authority

One commenter raised an issue that concerns a matter under the regulatory authority of the Food and Drug Administration (FDA), not the Animal and Plant Health Inspection Service (APHIS). Specifically, the commenter expressed concern that irradiation will make foods unsafe to eat. The commenter stated that irradiation produced 2-alkylcyclobutanones, which she contended is a dangerous residue chemical present in irradiated fruits and vegetables.

The FDA has primary regulatory responsibility for ensuring that approved irradiation doses do not render foods unsafe to eat. FDA regulations (21 CFR 179.26) establish a limit of 1.0 kilogray for disinfestation of arthropod pests in fresh fruits and vegetables. All of the irradiation doses contained in this rule are significantly less than this approved safe dose limit.

Use of Irradiation to Treat Cut Flowers and Foliage

One commenter requested that we also provide for the use of irradiation to treat cut flowers and foliage that are subject to treatment requirements in the regulations.

We agree that cut flowers and foliage that are hosts of pests for which irradiation is an approved treatment can be treated at the pest-specific doses provided in this final rule. Therefore, in this final rule we have amended the phytosanitary treatment regulations as well as the Hawaiian and territorial quarantine regulations to provide for the use of irradiation to treat cut flowers and foliage. Specifically, we have amended paragraph (a) of § 305.31 to provide that irradiation at the pest-specific doses may be used to treat cut flowers and foliage. We have also amended § 305.31 by replacing the words “fruits and vegetables” with the word “article” each time they occur. Sections 305.34, 318.13–4f, and 318.58–4b provide administrative instructions for irradiation treatment of certain fruits

and vegetables from Hawaii, Puerto Rico, and the U.S. Virgin Islands, respectively. We have amended these sections by replacing the words "fruits and vegetables" with the word "article" each time they occur. Finally, we have amended the cut flowers regulations in § 319.74-2 by adding a new paragraph (d) to indicate that cut flowers may be treated at the pest-specific irradiation doses listed in § 305.31(a). Cut flowers and foliage are also subject to the packaging requirements provided in §§ 305.31 and 305.34 of the regulations.

Irradiation may have negative effects on the quality of cut flowers, and the shipper and facility operator are responsible for determining tolerance of cut flowers to treatment. APHIS assumes no responsibility for any loss or damage that may result in the use of irradiation.

Use of Irradiation To Control Pests

Two commenters objected to the use of irradiation to treat imported fruits and vegetables. One commenter stated that food in the United States has been altered so much that it has become inferior to food in Europe. A second commenter stated that APHIS should not employ irradiation as a treatment but should instead use other treatments and procedures to prevent the introduction of dangerous plant pests associated with imported fruits and vegetables. This second commenter added that irradiation has not been shown to be a safe, effective, or viable means to eradicate invasive pests and that the U.S. Department of Agriculture should cease pursuing irradiation as a treatment for plant pests.

We have not made any changes to the rule in response to these comments. Importers are free to choose other treatments authorized by the regulations in lieu of irradiation. The reason that irradiation may be attractive to certain importers, particularly those importing fresh tropical fruits from fruit fly-infested regions, is that irradiation allows fruits of higher quality to be imported. Alternative heat, cold, and fumigation treatments can cause unacceptable phytotoxicity (damage to the fruits). Also, these alternative treatments often must be used on fruit harvested before it is fully ripe. The irradiation alternative allows importers to sell riper, more valuable fruit, with less damage.

In authorizing irradiation treatments, we have considered both the efficacy and the environmental effects of irradiation compared to other treatments already authorized by our regulations. The irradiation treatments in the final rule are effective against the listed plant

pests. It is true that several technologies under development may also provide effective treatments for various plant pests (e.g., pressure treatments, controlled atmosphere, and laser ultraviolet light pulses). To date, we have not seen conclusive scientific documentation that establishes standard methodologies for these treatments, or that demonstrates that these treatments effectively control pests of concern in fruits and vegetables subject to APHIS regulations. APHIS is always willing to evaluate petitions to add new treatments to our import regulations. Petitioners should submit a detailed description of the methodology and standards of the treatment to be evaluated, and should include any scientific studies that document the effectiveness of the treatment and related issues (e.g., quality effects on treated articles).

One commenter stated that the proposed rule could stimulate the construction of more irradiation facilities, some of which could use radioactive cobalt-60 or cesium-137, which Federal regulations permit. The commenter stated that these facilities will pose serious risks to the communities where they are built.

We are not making any changes in response to this comment. The safety of operations of irradiation facilities is regulated by the Nuclear Regulatory Commission (NRC). NRC ensures that such facilities are built and operated according to Federal regulations. To be licensed, the facility must have been designed with multiple fail-safe measures, and must establish extensive and well-documented safety procedures and worker training. With proper design and operating procedures, commercial irradiation facilities can be operated safely and without posing any significant radiation risk to workers or the public.

Recommended Doses

One commenter presented two studies¹ which demonstrated that Mexican fruit fly (Mexfly) is more radiotolerant than West Indian fruit fly, but noted that we proposed an irradiation dose of 100 Gy for West Indian fruit fly and only 70 Gy for Mexfly. The commenter recommended

lowering the dose for West Indian fruit fly to 70 Gy.

We have reviewed the research submitted by the commenter and agree that the dose for West Indian fruit fly (*Anastrepha obliqua*) should be lowered to 70 Gy and have done so in this final rule.

Two commenters stated that it was unnecessary to list green scale in the pest table in § 305.31 because it requires the generic dose (400 Gy). One commenter noted that this implied that 400 Gy was the lowest possible dose that can control green scale. The second commenter added that there has been no large-scale research done on this dose, but that preliminary research at the University of Hawaii suggested 250 Gy would control green scale.

We agree with these commenters and have amended the table in § 305.31(a) by removing the entry for *Coccus viridis*, green scale.

One commenter recommended adding a statement in the final rule that lower irradiation doses might be sufficient for the plant pests being added in this rule in order to encourage more research on minimum irradiation levels.

We are not making any changes as a result of this comment. As stated previously in this document, APHIS is always willing to evaluate research that supports new treatments or changes to existing treatments such as lowering the required doses for irradiation. Petitioners should submit any scientific studies that document the effectiveness of the dose, and APHIS will consider each request as it is presented.

One commenter recommended rounding irradiation doses to the nearest 10 Gy increment because dosimeters can vary by 1 to 2 percent in their accuracy. The commenter added that it is difficult during research to accurately apply doses in less than 10 Gy increments due to variability in the density and consistency of the infested fruit or vegetable.

We are not making any changes in response to this comment. We believe that the measures we have in place to monitor and administer irradiation treatment will ensure that at least the appropriate minimum dose is administered. When applying irradiation treatment, several factors are taken into account, including geometry of the source, the dimensions of the irradiation container, as well as the bulk-density of the load and its distribution. Recording of process parameters and dosimetry is required to ensure that the treatments applied are within the limits established by APHIS. Further, the available data indicate that the doses we proposed are the lowest

¹ Bustos, M.E., Enkerlin, W., Reyes, J., and Toledo, J. 2004. Irradiation of mangoes as a postharvest quarantine treatment for fruit flies (Diptera: Tephritidae). *J. Econ. Entomol.* 97: 286-292.

Hallman, G.J. and Worley, J.W. 1999. Gamma radiation doses to prevent adult emergence from immatures of Mexican and West Indian fruit flies (Diptera: Tephritidae). *J. Econ. Entomol.* 92: 967-973.

effective doses necessary to achieve phytosanitary security; thus, rounding a dose up to the nearest 10 Gy increment would have the effect of requiring more than the minimum dose and would be contrary to our World Trade Organization (WTO) agreements.

Safeguards on Commodity Movement

Two commenters noted that we should put in place safeguards, such as sealed containers, against plant pest spread for untreated commodities that are moved to the mainland United States for treatment. One of the commenters suggested prohibiting movement of untreated commodities with pretreated commodities and adding protocols for transport and containment upon arrival.

Section 305.34 of the regulations sets forth instructions for fruits and vegetables shipped from Hawaii to the mainland United States, including safeguards for untreated commodities being shipped to the mainland United States for treatment. For imported fruits and vegetables, § 305.31, paragraph (g)(1) prohibits packaging irradiated fruits and vegetables with nonirradiated fruits and vegetables and paragraph (g)(2) provides packaging provisions for fruits and vegetables irradiated prior to entering the United States to prevent the entry of fruit flies. However, § 305.31 does not contain packaging provisions for imported fruits and vegetables to be irradiated upon arrival in the United States. Therefore, we are amending § 305.31(g) in this final rule by adding a new paragraph that requires cartons of untreated regulated articles being imported into the United States for treatment to be shipped in shipping containers sealed prior to importation with seals that will visually indicate if the shipping containers have been opened. These provisions we have added regarding imported articles mirror those in § 305.34 for untreated articles moved from Hawaii to the mainland United States for treatment.

Bananas from Hawaii

One commenter stated that the configuration of bananas on the stalk make visual inspections an ineffective detection method. The commenter added that the lethal dose for banana moth should be determined before including this commodity in the regulations.

We have determined that the generic dose of 400 Gy would be sufficient for banana moth larvae; however inspection is necessary for pupae and adults of this pest. Bananas may also undergo irradiation treatment at a dose of 150 Gy for fruit flies, which would require

inspection for banana moth and green scale as an additional mitigation measure. We agree with this commenter that the configuration of bananas on the stalk makes visual inspection more difficult. Therefore, we have amended § 318.13–4i, paragraphs (b)(1) and (b)(2), in this final rule to specify that bananas must be removed from the stalk during inspection.

One commenter suggested that we allow green bananas from Hawaii grown under the systems approach to be irradiated at 400 Gy if found to be infested with green scale or to have certain defects that would otherwise trigger rejection upon inspection.

We agree with this commenter and have amended § 318.13–4i in this final rule by revising paragraph (b), introductory text, to state that “Bananas of any cultivar or ripeness that do not meet the conditions of paragraph (a) of this section may also be moved interstate from Hawaii with irradiation in accordance with the following conditions.”

Sweetpotatoes

One commenter questioned whether early stages of Kona coffee root-knot nematode could be found by visual inspection.

We have found inspection to be very effective at detecting nematodes of all stages.

One commenter suggested that the regulations should provide that the required probes be placed in the largest roots when applying heat treatment to sweetpotatoes.

We agree that inspectors should locate temperature probes in the largest potatoes when applying heat treatment. Therefore, we have amended § 305.24(k)(1) in this final rule to provide that temperature probes must be placed in the approximate center of the “largest individual sweetpotato roots.”

One commenter stated that recent research² indicates that sweetpotato weevil, West Indian sweetpotato weevil, and sweetpotato vine borer can all be neutralized with a dose of 150 Gy. The commenter asked that we add West Indian sweetpotato weevil and sweetpotato vine borer with a dose of 150 Gy and that we change the dose for sweetpotato weevil to 150 Gy.

After reviewing the research provided by the commenter, we have amended the table in § 305.31(a) in this final rule by adding entries for West Indian sweetpotato weevil and sweetpotato

vine borer and specifying a minimum irradiation dose of 150 Gy for both pests. We have also reduced the minimum irradiation dose for sweetpotato weevil from 165 Gy to 150 Gy.

With these changes, all but one of the pests of concern for sweetpotatoes from Hawaii for which irradiation is an authorized treatment may be treated with a minimum irradiation dose of 150 Gy. The exception is the ginger weevil (*Elytrotreinus subtruncatus*), which requires a minimum irradiation dose of 400 Gy. (The regulations also require inspection for two other pests for which irradiation is not an authorized treatment, i.e., the gray pineapple mealybug [*Dysmicoccus neobrevipes*] and the Kona coffee-root knot nematode [*Meloidogyne konaensis*]). In the proposed rule, we proposed to add a vapor heat treatment option for sweetpotato from Hawaii that included provisions for the sampling, cutting, and inspection of sweetpotatoes for the ginger weevil, and we are adopting those proposed provisions in this final rule (see § 318.13–4d in the regulatory text at the end of this document). To harmonize the irradiation treatment provisions for sweetpotatoes from Hawaii with those new vapor heat provisions, we have amended the regulations in § 305.34 in this final rule to offer two irradiation treatment options: The existing 400 Gy dose or a 150 Gy dose supplemented by sampling, cutting, and inspection for the ginger weevil, with the sampling, cutting, and inspection requirements being the same as those found in the vapor heat provisions in § 318.13–4d. The inspection requirements for the gray pineapple mealybug and the Kona root-knot nematode will continue to apply to sweetpotatoes treated at both the 400 Gy and 150 Gy dose. To effect this change, we have amended § 305.34(b)(7)(i) and (ii) in this final rule to reflect the new inspection requirement for ginger weevil if sweetpotatoes are to be irradiated at 150 Gy; a new footnote in the entry for sweetpotato in the table in paragraph (a)(1) of that section directs the reader to § 305.34(b)(7)(i) and (ii). Because litchi from Hawaii is also subject to additional inspection requirements in § 305.34(b)(7), the entry for litchi in the table has also been annotated with a reference to that footnote.

Pineapples From Hawaii

One commenter asked that we delete the reference to “other than smooth Cayenne” in the entry for pineapples in § 305.34, paragraph (a)(1). The commenter noted that this would allow

² Follett, Peter A. Irradiation for postharvest control of *Omphisa anastomosalis* (Lepidoptera: Pyralidae), *Euscepes postfaciatus* and *Cylas formicarius elegantulus* (Coleoptera: Curculionidae) in sweetpotatoes.

all varieties of pineapple to be treated by irradiation for plant pests in accordance with § 305.31(a) and § 305.34(a)(2).

The commenter is correct. We mistakenly included the reference to "other than smooth Cayenne" when in fact, all varieties of pineapple are eligible for irradiation. We have amended the entries for pineapple in § 305.34(a)(1) and § 318.13–4f by removing the words "(other than smooth Cayenne)."

General Comments

In the supplementary information of our proposed rule, we stated that mites are not arthropod plant pests. Two commenters noted that mites are arthropod plant pests and that we should not use the term "arthropod."

We agree with the commenters have amended the last row in the table in § 305.31 by changing the words "phylum *Arthropoda*" to "class *Insecta*."

One commenter suggested that we should explain to inspectors what they can expect to find with properly irradiated commodities (e.g., live fruit flies and perhaps eggs, but no further development from either).

Customs and Border Protection and APHIS inspectors are trained as to what they might specifically find in commodities treated by irradiation and have been inspecting irradiated fruit moved interstate for more than a decade. Therefore, it is unnecessary to include such information in this final rule.

One commenter suggested that we include a provision to prohibit irradiation of low-oxygen-stored produce until research on the effectiveness of irradiation on such produce can be completed. The commenter stated that a recent study showed that four pests showed an increase in radiotolerance when stored in such conditions.

We have no evidence to either support or refute the commenter's concern with the response of pests in low-oxygen-stored produce to irradiation, but agree that irradiation should be only applied to articles that have been stored under certain conditions. Because these conditions may vary based on the specific commodity, pest of concern, or country of origin, we will address specific storage conditions in the operational work plan or the compliance agreement with plant health officials in the areas where commodities are produced, packed, and treated.

One commenter stated that we incorrectly classified the dose ranges for

plant pests in the International Plant Protection Convention Guidelines for the Use of Irradiation as a Phytosanitary Measure (ISPM Publication No. 18) as recommended minimum dose ranges. The commenter stated that these doses are only estimates.

We acknowledge that we incorrectly characterized the estimates as recommended minimum doses. That statement appeared in the supplementary information of the proposed rule, however, so there is no need to make any changes to the regulations in this document.

Two commenters stated that research did not demonstrate that all fruit flies of the family *Tephritidae* would be neutralized by a dose of 150 gray.

The commenters are correct in that, technically, all fruit flies of the family *Tephritidae* were not tested, but all of the fruit flies that were tested in this family were neutralized by this dose. Therefore, we consider the results from the fruit flies we tested to be applicable to the entire *Tephritidae* family.

However, we agree that it would have been clearer to state that "we consider all fruit flies of the family *Tephritidae* to be neutralized by a dose of 150 gray."

In the supplementary information of the proposed rule, we stated that required irradiation doses were specific to plant pests rather than to the commodities with which they are associated, which reflects the fact that the effectiveness of irradiation treatment is dependent on the dose that is absorbed by the commodity. One commenter considered this statement misleading, noting that it suggests that the radiation is absorbed by the commodity thereby killing the insect. The commenter added that the doses are specific to the pest rather than commodity because the commodity provides limited shielding for the insect from the ionizing radiation.

We agree with this commenter, but because this statement appeared in the supplementary information of the proposed rule, there is no need to make any changes to the regulations in this document.

In the proposed rule, we referred to minimum doses as "pest-specific." One commenter suggested that we use either "pest species-specific" or "individual pest-specific."

We are not making changes in response to this comment. We prefer the general term "pest-specific" which can apply to both individual pests or a pest group (e.g., all fruit flies).

In the proposed rule, we stated that fruit quality problems associated with high irradiation doses prompted us to examine lowering doses. One

commenter noted that we made no mention of any financial considerations taken into account.

While economic benefits result from our lowering of irradiation doses, they are not the reason for our doing so. Under WTO agreements, we are obliged to base our regulations on sound science; to ignore research that showed lower irradiation doses to be effective would be contrary to these agreements.

One commenter stated that the proposed rule would open up large parts of the United States to increased risks of infestation. The commenter stated that our reasoning that fruit flies would not survive irradiation treatment or weather conditions in many areas of the United States was faulty. The commenter added that while the rule only applies to 12 species of fruit flies, there are numerous hosts in the United States that would be susceptible to those fruit flies.

We agree that preventing the introduction of exotic fruit flies into the United States is of the utmost importance. According to ARS, 150 Gy will be sufficient to neutralize all fruit flies and that doses lower than 150 gray are sufficient to neutralize certain species of fruit flies. We believe that treatment of fruits, vegetables, cut flowers, and foliage at these doses, when properly administered, will be sufficient to prevent the introduction of fruit flies via commodities treated by irradiation.

Economic Analysis

One commenter suggested that our economic analysis should take note of some advantages to irradiation, such as the fact that fruit that is to be irradiated can be allowed to ripen longer on the tree, resulting in higher-quality fruit.

We have added a paragraph highlighting additional advantages of irradiation over some other treatments to the economic analysis in this final rule.

One commenter stated that it is naive to assume that there are markets for irradiated fruits and vegetables in the United States. The commenter noted that since the FDA legalized the irradiation of fruits and vegetables in 1986, very few types of irradiated produce have been sold in U.S. grocery stores. The commenter also cited the financial troubles of a company that stood to benefit from irradiation as an example of the lack of a market for irradiated fruit in the United States.

The proposed rule and this final rule are concerned with the phytosanitary security of fruits and vegetables and not their marketing. Our regulations offer various treatment options; whether or

not producers or distributors choose to use irradiation when it is available is up to them.

Miscellaneous

Two commenters pointed out several nonsubstantive editorial errors in the proposed rule. We appreciate the commenters bringing these errors to our attention and wherever appropriate, have made the corrections in this document.

Other Comments

One commenter suggested that in light of the availability of the generic irradiation dose, we reconsider our current pest risk analysis process and require evidence only that the few target pests that could not be treated effectively with irradiation are not present in a particular country or are not pests of concern for a particular commodity, rather than requiring that a list all possible pests be considered in the pest risk analysis.

We agree with this commenter that the availability of the generic irradiation dose may simplify the pest risk analysis process for commodities from countries where pests that can be targeted with the generic dose exist. We expect that a pest list would still have to be assembled in most cases, but the risk management aspect of the risk analysis process could be abbreviated if the risks associated with all identified quarantine pests could be addressed through the application of the generic irradiation dose. If quarantine pests that could not be addressed using the generic dose were identified in the pest list, then the risk management analysis could be limited to examining mitigation measures for those pests alone.

The commenter also requested that we reconsider the requirement that every new commodity must be added to the regulations through rulemaking before being eligible for entry into the United States.

While we are unable to make any changes in this document in response to this comment, we are currently developing a proposed rule that would redesign the fruits and vegetables regulations to provide for the evaluation and approval or denial of new import requests in a more expeditious and effective manner.

One commenter asked that we postpone the comment period for the proposed rule because a request submitted by her organization under the Freedom of Information Act (FOIA) regarding another rulemaking related to irradiation had not yet been fulfilled.

We do not believe it is necessary or appropriate to delay this final rule

pending the resolution of commenter's FOIA request concerning an entirely separate rulemaking. The APHIS FOIA staff is working to address the request referred to by the commenter.

Therefore, for the reasons given in the proposed rule and in this document, we are adopting the proposed rule as a final rule, with the changes discussed in this document.

Executive Order 12866 and Regulatory Flexibility Act

This rule has been reviewed under Executive Order 12866. For this action, the Office of Management and Budget has waived its review under Executive Order 12866.

This rule makes several amendments to the current provisions for the use of irradiation as a treatment for various plant pests, allows the use of irradiation and inspection as a treatment for bananas moved interstate from Hawaii as an alternative to the systems approach currently described in the regulations, and allows the use of a vapor heat treatment for sweetpotatoes moved interstate from Hawaii as an alternative to fumigation with methyl bromide and irradiation. The potential economic impacts of the changes are discussed below.

Irradiation Treatment for Fruits, Vegetables, Cut Flowers, and Foliage

The regulations in § 305.31 set out standards, minimum doses, and other requirements for performing irradiation treatments on imported fruits, vegetables, cut flowers, and foliage and set out minimum doses necessary to neutralize 11 fruit flies and the mango seed weevil. This rule adds minimum doses for more pests and lowers the minimum doses for others. Specifically, this rule establishes:

- A minimum generic dose of 400 Gy for all plant pests of the class *Insecta* other than pupae and adults of the order Lepidoptera;
- A minimum generic dose of 150 Gy for all fruit flies of the family *Tephritidae*;
- Lower minimum doses for certain fruit flies; and
- New approved minimum doses for 10 plant pests.

This rule also allows irradiation to serve as an alternative to other approved treatments for additional articles moved interstate from Hawaii, Puerto Rico, and the U.S. Virgin Islands. Articles from Hawaii, Puerto Rico, and the U.S. Virgin Islands that are required to be treated by other means for pests listed in § 305.31(a) prior to interstate movement will be allowed to be moved interstate if they are treated with irradiation at the

doses listed in § 305.31(a) and in accordance with the other conditions specified in § 305.34.

Section 305.34 has only provided for irradiation treatment of fruits and vegetables from Hawaii; however, we have determined that irradiation treatment can be used effectively for commodities from Puerto Rico and the U.S. Virgin Islands if the safeguards in § 305.34 are implemented. Currently, no irradiation facilities exist in Puerto Rico or the U.S. Virgin Islands, and no requests have been received to approve the construction of such facilities. However, this rule provides for the option of moving the commodities under limited permit to an irradiation facility on the U.S. mainland for treatment prior to entering interstate commerce.

Economic Effects on Small Entities of Changes in Irradiation Treatment Provisions

The Regulatory Flexibility Act requires that agencies specifically consider the economic impact of their regulations on small entities. The Small Business Administration (SBA) has established size criteria using the North American Industry Classification System (NAICS) to determine which economic entities meet the definition of a small firm.

Irradiation facilities affected by this rule will belong to one of the following two NAICS categories: (1) Firms providing irradiation services for the treatment of fruits and vegetables, which would fall within NAICS category 115114, "Postharvest Crop Activities (except Cotton Ginning)"; or (2) firms providing irradiation services for decontamination or sterilization purposes, which would fall within NAICS category 811219, "Medical and surgical equipment repair and maintenance services."

Most treatments of Hawaiian produce are likely to occur at an existing irradiation facility on the island of Hawaii. This facility is used to treat other fruits and vegetables for which irradiation is an approved treatment and can be classified under NAICS category 115114. The SBA criteria classify this facility as a small entity, since its annual sales are less than \$6 million.

Another firm on the U.S. mainland operates two facilities in Illinois and one facility in New Jersey. Its primary service is to provide irradiation treatment for the sanitation of medical devices on contract. This firm is classified within NAICS category 811219. However, since it is part of a larger corporation for which annual receipts may exceed \$6 million, this

firm is not classified as a small entity under the SBA criteria. Thus, at least one firm that could be affected by this rule is a small entity.

Irradiation facilities, whether large or small, will benefit from this rule. The range of commodities imported and moved interstate for which irradiation will be an approved treatment will increase. At the same time, dosage levels, and therefore operating costs, will decrease for many commodities. The changes to irradiation doses and provisions allowing the use of pest-specific doses to treat commodities for interstate movement will facilitate the importation of fruits, vegetables, cut flowers, and foliage and their interstate movement from Hawaii, Puerto Rico, and the U.S. Virgin Islands. For certain pests for which irradiation is already an approved treatment, required irradiation dosages will be lowered to the minimum level necessary. In other instances, irradiation will be newly allowed as an alternative phytosanitary treatment.

This rule will result in lower costs and increased flexibility for importers, gains that could be expected to be at least partly realized by U.S. consumers through lower prices, assuming competitive markets. For some commodities, irradiation may also provide quality advantages over other treatment methods in terms of increased shelf life. Irradiation allows fruits and vegetables of higher quality to be imported. Alternative heat, cold, and fumigation treatments can cause unacceptable damage to fruits, vegetables, cut flowers, and foliage. At this time, we are unsure as to the extent of damage the use of irradiation may cause to certain cut flowers and it is entirely the importer's or owner's responsibility to assess which treatment should be used with each variety of cut flowers. Also, these alternative treatments often must be used on fruit harvested before it is fully ripe. Irradiation allows importers to sell riper, more valuable fruit, with less damage. Choice of irradiation as a treatment alternative would rest upon its expected net returns relative to other treatment methods.

Because these changes will have the potential to affect the importation or interstate movement of a wide range of commodities, it is difficult to predict exactly what economic effects these changes will have. However, while affected irradiation firms, large and small, are expected to benefit, we do not expect the impacts to be significant.

Irradiation and Inspection for Bananas Moved Interstate from Hawaii

The regulations in § 318.13–4i have provided that green bananas (*Musa* spp.) of the cultivars “Williams,” “Valery,” “Grand Nain,” and standard dwarf “Brazilian” may be moved interstate from Hawaii under a systems approach. At this time, only green bananas of these specified cultivars have been eligible for interstate movement under those provisions.

We are adding two combinations of irradiation and inspection as treatments for bananas from Hawaii. Specifically, bananas, regardless of cultivar or ripeness, from Hawaii will be eligible for interstate movement if they have been inspected in Hawaii for adults and pupal stages of the banana moth *Opogona sacchari* (Bojen), and have undergone irradiation treatment with a minimum dose of 400 gray at an approved facility. Bananas from Hawaii will also be eligible for interstate movement if they have been inspected in Hawaii for the banana moth and the green scale, *Coccus viridis* (Green), and have undergone irradiation treatment with a minimum dose of 150 gray at an approved facility.

Cost of Irradiation Treatment

The cost of irradiation is estimated at 15 cents per pound.³ We expect that most bananas moved interstate from Hawaii under this approach will be treated at the existing commercial irradiation facility on the island of Hawaii. However, the treatment could be performed at the irradiation facilities on the mainland United States as well.

Cost of APHIS Inspection

Monitoring of quarantine treatments conducted during standard business hours (weekdays between 8 a.m. and 4:30 p.m.) on the island of Hawaii comes at no cost to the facility. APHIS charges for the monitoring of treatments conducted before 8 a.m. and after 4:30 p.m. and on weekends at a time-and-a-half rate.

Benefits

The combination of irradiation treatment and inspection will offer an alternative to the systems approach for green fruit of the specified four banana cultivars, and will allow fruit of any ripeness or cultivar to be moved interstate from Hawaii. The approach described in this rule can be used to mitigate the pest risk associated with all Hawaiian bananas, regardless of cultivar or ripeness. This will allow banana producers and parties moving bananas

interstate greater flexibility in operations, more choices with regard to the types of bananas moved interstate, a greater volume of bananas to ship, and less risk of facing rejections during inspection under the systems approach and Banana Compliance Agreement.

Growers have been reluctant to ship bananas to U.S. mainland markets under the systems approach because § 318.13–4i(c) of the regulations has required that bananas to be moved interstate be inspected by an inspector and found free of the following defects: Prematurely ripe fingers, fused fingers, or exposed flesh (not including fresh cuts made during the packing process). Bananas moved interstate from Hawaii under this systems approach are required to be free of these defects because they are conducive to fruit fly infestation. However, growers are concerned about the risk of having whole shipments of fruit prohibited from interstate movement as a result of a single fault detected when bananas in a random selection of boxes are inspected. No commercial container shipments of bananas have been made to U.S. mainland markets under the regulations in effect prior to this rule. Since the irradiation treatment options provided by this rule are sufficient to neutralize fruit flies and other pests of concern, irradiation will provide the Hawaiian banana industry with an alternative treatment for interstate movement and could open new marketing opportunities.

U.S. consumers will benefit from an increased supply of bananas. Growers in Hawaii believe that the U.S. mainland demand for bananas from Hawaii may be equivalent to (if not higher than) the existing demand for Hawaiian papaya. Hawaiian growers moved approximately 12 million pounds of papayas to U.S. mainland markets in 2003.⁴ Demand may be especially high for the apple banana variety, which has a higher sugar content and more aromatic flavor than the standard commercial banana varieties currently available in U.S. mainland markets. Consumers will benefit from the availability of this specialty product.

Hawaii accounts for almost all U.S. banana production.⁵ In 2002, there were 677 banana farms in Hawaii,⁶ and the value of sales amounted to \$ 8.6

⁴ Source: Hawaii Department of Agriculture.

⁵ The Census of Agriculture (2002) reports minimal acreage in California, Florida, and Texas, which together account for only 131 acres.

⁶ National Agricultural Statistics Service, 2002 Census of Agriculture.

³ Source: Hawaii Department of Agriculture.

million.⁷ Table 1 summarizes production information for bananas and papayas in Hawaii. The utilized

production of bananas amounted to 19.5 million pounds in 2002.

TABLE 1.—PRODUCTION STATISTICS FOR BANANAS AND PAPAYAS IN HAWAII (2002)

Item	Bananas	Papayas
Bearing acreage (acres)	1,300	1,720.
Utilized production (1,000 pounds)	19,500	45,900.
Price (per pound)	\$0.430	\$0.260.
Value of utilized production	\$8.385 million	\$11.924 million.
Movement to mainland U.S. markets (1,000 pounds)	None	12,000.

Sources: Hawaii Department of Agriculture (movement statistics) and National Agricultural Statistics Service.

The United States imported 7,883 million pounds (3,576 million kg) of fresh bananas in 2003, valued at \$959 million.⁸ Ecuador, Costa Rica, Guatemala, Colombia, and Honduras accounted for 97 percent of the quantity of imports (table 2). Compared to the 7,883 million pounds of bananas currently imported, Hawaii's total production of 20 million pounds is extremely small, and it is not likely that 100 percent of the State's production will be moved to the mainland United States. Thus, as long as phytosanitary mitigation by means of the approved treatments is maintained, the interstate movement of bananas from Hawaii is unlikely to significantly affect current U.S. trade in fresh bananas.

TABLE 2.—QUANTITY AND VALUE OF FRESH BANANAS IMPORTED INTO THE UNITED STATES FROM THE FIVE MAJOR EXPORTING COUNTRIES (2003)

Country	Quantity (million kg)	Value (million U.S. dollars)
Ecuador	902	237.8
Costa Rica	901	247.5
Guatemala	868	229.1
Colombia	429	117.7
Honduras	388	100.4
Total im-ports	3,576	959.3

Source: World Trade Atlas (2003).

Economic Effects on Small Entities of Irradiation and Inspection Provisions for Bananas

Most treatments of Hawaiian bananas are likely to occur at the existing irradiation facility on the island of Hawaii, which, as noted previously, is considered a small entity.

Banana farming is classified under NAICS category 111339 as "Other

Noncitrus Fruit Farming." The SBA considers entities in this category to be small if their average annual receipts are less than \$750,000. The 677 banana farms in Hawaii accounted for annual sales of \$8.6 million in total in 2002. Therefore, it is likely that most Hawaiian banana farms will be classified as small entities under the SBA criteria. The treatment monitoring program will be mainly operated by APHIS personnel, and no impact is anticipated on other small entities or government agencies.

Vapor Heat Treatment for Sweetpotatoes Moved Interstate From Hawaii

We are allowing vapor heat treatment, combined with tuber cutting and visual inspection, to be used as a treatment for sweetpotatoes moved interstate from Hawaii. We believe this treatment will be an effective alternative to the methyl bromide and irradiation treatments currently prescribed by the regulations to control pests of concern.

Cost of Vapor Heat Treatment

Hawaii has three packing plants on the Island of Hawaii that provide vapor heat treatment services. No other vapor heat treatment plants are currently in operation elsewhere in the State. Since APHIS has yet to certify a facility for the treatment of sweetpotato by vapor heat, the costs of treating this crop specifically cannot be determined with certainty at this time. However, one of the packinghouses estimated that vapor heat treatment costs could amount to 2 to 3 cents per pound for the required treatment protocol. This estimate considered the costs of labor, electricity, water, and sewer service. APHIS has traditionally certified vapor heat treatment chambers (for example, for papaya) in the "fully loaded configuration." The costs of treating sweetpotato in smaller batch loads still

have to be determined. This estimate of treatment cost also does not include a markup for the facility. The markup will be determined by the number of plants providing service and the demand for service.

Cost of APHIS Inspection for Vapor Heat Treatment or Irradiation

Monitoring of quarantine treatments conducted during standard business hours (weekdays between 8 a.m. and 4:30 p.m.) on the island of Hawaii comes at no cost to the facility. APHIS charges for the monitoring of treatments conducted before 8 a.m. and after 4:30 p.m. and on weekends at a time-and-a-half rate.

Comparison of Vapor Heat Treatment, Irradiation, and Methyl Bromide

Vapor heat treatment will provide the Hawaiian sweetpotato industry with an alternative treatment to irradiation or methyl bromide fumigation. If vapor heat treatment can be performed at 2 to 3 cents per pound, it will constitute the most cost-effective treatment, compared to irradiation at 15 cents per pound and fumigation costs ranging from 40.6 cents per pound for 1 pallet to 6.7 cents per pound for 12 pallets (table 3). (These are treatment costs only and do not include the costs of APHIS monitoring or inspection activities or inter-island transportation costs necessary to perform treatments.)

TABLE 3.—ESTIMATED PER-UNIT COST OF VAPOR HEAT TREATMENT, IRRADIATION, AND METHYL BROMIDE FUMIGATION

Treatment	Per unit cost (cents per pound)
Vapor heat treatment	2–3
Irradiation	15

⁷ From <http://www.nass.usda.gov/hl/fruit/annban.htm>. Sales of Hawaiian bananas in 2003 were valued at \$9.225 million.

⁸ World Trade Atlas, 2003.

TABLE 3.—ESTIMATED PER-UNIT COST OF VAPOR HEAT TREATMENT, IRRADIATION, AND METHYL BROMIDE FUMIGATION—Continued

Treatment	Per unit cost (cents per pound)
Methyl bromide fumigation: ¹	
One pallet	40.6
Two pallets	20.3
Three pallets	13.5
Four pallets	10.1
Five pallets	8.1
Six pallets	6.7
Nine pallets	7.6
Twelve pallets	6.9

¹One pallet contains 1,500 pounds of sweetpotatoes.

Sources: Packinghouse estimate (vapor heat treatment); Hawaii Department of Agriculture (irradiation and methyl bromide fumigation).

The availability of vapor heat treatment thus provides the Hawaiian sweetpotato industry with an alternative treatment option at a competitive cost. Furthermore, the vapor heat treatment plants in Hawaii will benefit if sweetpotatoes are included in the list of agricultural products to be treated. The availability of vapor heat treatment as an alternative to fumigation might become increasingly important in view of the global phaseout of methyl bromide under the Montreal Protocol. Irradiation may have positive effects on the quality and shelf life of the tubers, and allows flexibility since both small and large product lots can be staged for treatment to meet specific market demands. Vapor heat treatment is not known to offer quality or shelf-life benefits to the product, but some consumers may prefer this option above irradiation, especially in Japan, Canada, and Europe.

Impact on U.S. Sweetpotato Production

Commercial sweetpotato production in Hawaii occurs on the islands of Hawaii, Kauai, Maui, and Oahu. In 2002, there were 59 sweetpotato farms,⁹ and the value of sales was \$989,000.¹⁰ The utilized production of sweetpotatoes in Hawaii was 1.8 million pounds in 2001 (table 4). The crop is in year-round production in Hawaii.

⁹ National Agricultural Statistics Service, 2002 Census of Agriculture.

¹⁰ From <http://www.nass.usda.gov/hi/vegetble/annveg.htm>.

TABLE 4.—PRODUCTION STATISTICS FOR HAWAIIAN SWEETPOTATOES (2001)

Item	Amount
Harvested acres	220
Yield per acre (1,000 pounds) ..	8.2
Production (1,000 pounds)	1,800
Farm price (cents per pound) ¹	50

¹The 2001 farm price for sweetpotato was 47.3 cents per pound in Hawaii, Honolulu, and the Kauai Counties, and 60 cents per pound in the Maui County (Hawaiian Department of Agriculture).

Source: Hawaii Agricultural Statistics Service.

In the mainland United States, sweetpotato is grown commercially in Alabama, California, Georgia, Louisiana, Mississippi, New Jersey, North Carolina, South Carolina, Texas, and Virginia. North Carolina, Louisiana, Mississippi, and California account for the major proportion of production area by State (table 5). In total, the United States produced 1,355 million pounds of sweetpotatoes from 93,500 acres in 2003 (table 6). The Hawaiian sweetpotato production of 1.8 million pounds thus comprises a minor proportion of the total production of 1,355 million pounds in the United States.

TABLE 5.—ACRES OF SWEETPOTATOES PLANTED IN THE UNITED STATES (2003)

State	Acres planted
North Carolina	42,000
Louisiana	18,000
Mississippi	14,000
California	10,100
Texas	3,400
Alabama	2,900
Others ¹	3,100
Total	93,500

¹ Including Hawaii.
Source: Economic Research Service, USDA.

TABLE 6.—PRODUCTION AND UTILIZATION STATISTICS FOR SWEETPOTATOES IN THE UNITED STATES (2003) ¹

Item	Amount
Acres planted	93,500
Three-year average yield (cwt/acre)	150
Production (million pounds)	1,355
Imports (million pounds)	17.0
Exports (million pounds)	53.0
Total utilization (million pounds) ²	1,148.3
Per capita use (pounds)	3.9

TABLE 6.—PRODUCTION AND UTILIZATION STATISTICS FOR SWEETPOTATOES IN THE UNITED STATES (2003) ¹—Continued

Item	Amount
Three-year average per capita use (pounds)	4.0
Current dollars (\$/cwt)	15.75
Constant 1996 dollars (\$/cwt) ..	13.91

¹ Estimates are for the total United States, and therefore include Hawaii. Forecasted estimates are shown.

² Total utilization includes 103 million pounds used for seed and 67.8 million pounds accruing to feed use, shrink, and loss.

Source: Economic Research Service, United States Department of Agriculture. Acres were obtained from Lucier, G. "Sweet potatoes—getting to the root of demand." Economic Research Service, USDA, 2002.

The Hawaiian sweetpotatoes intended for the U.S. mainland markets are of a special purple flesh variety, and they are therefore shipped to the mainland as a specialty product intended for niche markets. U.S. mainland consumers could, therefore, benefit from an increased supply of these specialty sweetpotatoes.

Interstate movement provides Hawaiian growers and shippers with increased marketing opportunities. Sweetpotatoes are in year-round production in Hawaii, but some seasonal variation in volume is expected. Out-shipment to U.S. mainland markets is estimated at 50,000 to 60,000 pounds per week. New plantings of the crop have increased on the island of Hawaii since irradiation was approved as an alternative to methyl bromide fumigation in June 2003. However, plantings are likely to increase each year if the market demand increases for Hawaiian sweetpotatoes regardless of whether the product is treated by methyl bromide fumigation, irradiation, or vapor heat treatment. Nevertheless, even if sweetpotato production increases in Hawaii, the relative volume of production (1.8 million pounds) remains extremely small in comparison to the volume of U.S. mainland sweetpotato production (1.36 billion pounds).

Thus, since Hawaiian production is so small in comparison to U.S. mainland production, and as long as phytosanitary mitigation by the approved treatments is maintained, sweetpotato shipments from Hawaii are unlikely to affect mainland producers. Consumers will benefit from the availability of the purple-fleshed specialty sweetpotato product, and the Hawaiian sweetpotato industry will gain opportunities to expand its mainland U.S. markets.

Vapor Heat Treatment of Sweetpotatoes Moved Interstate From Hawaii

The availability of vapor heat treatment at a competitive cost could divert some sweetpotatoes moved interstate from Hawaii from the existing irradiation facility in Hawaii to a vapor heat treatment facility. This will affect the existing irradiation facility in Hawaii, which is a small entity. However, it is not known at this time what proportion of Hawaiian sweetpotatoes moved interstate will be treated with vapor heat instead of irradiation.

On the other hand, vapor heat treatment facilities could benefit by the addition of vapor heat as an approved treatment for sweetpotatoes moved interstate from Hawaii. However, since facilities for the vapor heat treatment of Hawaiian sweetpotatoes have not been certified yet, the businesses cannot be conclusively categorized into small or large entities at this time.

Sweetpotato farming is classified under NAICS category 111219, "Other Vegetables (except Potato) and Melon Farming." According to the SBA's criteria, an entity involved in crop production is considered small if it has average annual receipts of less than \$750,000. The 59 sweetpotato farms in Hawaii accounted for annual sales of \$989,000 in total in 2002. Therefore, it is likely that most of these farms would be considered small entities according to the SBA criteria. The monitoring and inspection program will be mainly operated by APHIS personnel, and no impact is anticipated on other small entities and government agencies.

Under these circumstances, the Administrator of the Animal and Plant Health Inspection Service has determined that this action will not have a significant economic impact on a substantial number of small entities.

Executive Order 12372

This program/activity is listed in the Catalog of Federal Domestic Assistance under No. 10.025 and is subject to Executive Order 12372, which requires intergovernmental consultation with State and local officials. (See 7 CFR part 3015, subpart V.)

Executive Order 12988

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. This rule: (1) Preempts all State and local laws and regulations that are inconsistent with this rule; (2) has no retroactive effect; and (3) does not require administrative proceedings before parties may file suit in court challenging this rule.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the information collection or recordkeeping requirements included in this rule have been approved by the Office of Management and Budget (OMB) under OMB control number 0579-0281.

Government Paperwork Elimination Act Compliance

The Animal and Plant Health Inspection Service is committed to compliance with the Government Paperwork Elimination Act (GPEA), which requires Government agencies in general to provide the public the option of submitting information or transacting business electronically to the maximum extent possible. For information pertinent to GPEA compliance related to this rule, please contact Mrs. Celeste Sickles, APHIS' Information Collection Coordinator, at (301) 734-7477.

List of Subjects

7 CFR Part 301

Agricultural commodities, Plant diseases and pests, Quarantine, Reporting and recordkeeping requirements, Transportation.

7 CFR Part 305

Irradiation, Phytosanitary treatment, Plant diseases and pests, Quarantine, Reporting and recordkeeping requirements.

7 CFR Part 318

Cotton, Cottonseeds, Fruits, Guam, Hawaii, Plant diseases and pests, Puerto Rico, Quarantine, Transportation, Vegetables, Virgin Islands.

7 CFR Part 319

Coffee, Cotton, Fruits, Imports, Logs, Nursery stock, Plant diseases and pests, Quarantine, Reporting and recordkeeping requirements, Rice, Vegetables.

■ Accordingly, we are amending 7 CFR parts 301, 305, 318, and 319 as follows:

PART 301—DOMESTIC QUARANTINE NOTICES

■ 1. The authority citation for part 301 continues to read as follows:

Authority: 7 U.S.C. 7701-7772 and 7781-7786; 7 CFR 2.22, 2.80, and 371.3.

Section 301.75-15 also issued under Sec. 204, Title II, Pub. L. 106-113, 113 Stat. 1501A-293; sections 301.75-15 and 301.75-16 also issued under Sec. 203, Title II, Pub. L. 106-224, 114 Stat. 400 (7 U.S.C. 1421 note).

■ 2. In § 301.64-10, paragraph (g) introductory text and the OMB control

number citation at the end of the section are revised to read as follows:

§ 301.64-10 Treatments.

* * * * *

(g) *Approved irradiation treatment.* Irradiation, carried out in accordance with the provisions of part 305 of this chapter, is approved as a treatment for any fruit listed as a regulated article in § 301.64-2(a).

* * * * *

(Approved by the Office of Management and Budget under control number 0579-0088)

■ 3. In § 301.78-10, paragraph (c) introductory text is revised to read as follows:

§ 301.78-10 Treatments.

* * * * *

(c) *Approved irradiation treatment.* Irradiation, carried out in accordance with the provisions of part 305 of this chapter, is approved as a treatment for any berry, fruit, nut, or vegetable listed as a regulated article in § 301.78-2(a) of this subpart.

* * * * *

PART 305—PHYTOSANITARY TREATMENTS

■ 4. The authority citation for part 305 continues to read as follows:

Authority: 7 U.S.C. 7701-7772 and 7781-7786; 21 U.S.C. 136 and 136a; 7 CFR 2.22, 2.80, and 371.3.

■ 5. Section 305.2 is amended as follows:

■ a. By revising paragraph (h)(1) to read as set forth below.

■ b. In the table in paragraph (h)(2)(ii), under Hawaii, by adding a new entry, in alphabetical order, for "Banana" to read as set forth below.

■ c. In the table in paragraph (h)(2)(ii), under Hawaii, by removing the entry for "Sweet potato" and adding in its place a new entry for "Sweetpotato" to read as set forth below.

§ 305.2 Approved treatments.

* * * * *

(h) *Fruits and vegetables.* (1) Treatment of fruits and vegetables from foreign localities by irradiation in accordance with § 305.31 may be substituted for other approved treatments for any of the pests listed in § 305.31(a). Treatment of fruits and vegetables from Hawaii, Puerto Rico, and the U.S. Virgin Islands by irradiation at the minimum doses listed in § 305.31(a) and in accordance with § 305.34 may be substituted for other approved treatments for any of the pests listed in § 305.31(a).

(2) * * *

(ii) * * *

Location	Commodity	Pest	Treatment schedule
Hawaii	Banana	<i>Bactrocera curcurbitae</i> , <i>Bactrocera dorsalis</i> , IR. <i>Ceratitis capitata</i> , <i>Coccus viridis</i> .	
	Sweetpotato	<i>Euscepes postfasciatus</i> , <i>Omphisa anastomosalis</i> , MB T101-b-3-1 or § 305.24(k) or IR. <i>Elytrotreinus</i> or <i>subtruncatus</i> .	

* * * *

■ 6. In § 305.24, a new paragraph (k) is added to read as follows:

§ 305.24 Vapor heat treatment schedules.

* * * *

(k) *Vapor heat treatment for sweetpotatoes moved interstate from Hawaii.* (1) Temperature probes must be placed in the approximate center of the largest individual sweetpotato roots.

(2) The air surrounding the sweetpotato roots must be heated. After the temperature of the air surrounding the sweetpotato roots reaches 87.8 °F (31 °C), its temperature must be incrementally raised from 87.8 °F (31 °C) to 111.2 °F (44 °C) over a period of 240 minutes.

(3) Using saturated water vapor at 118.4 °F (48 °C), the core temperature of the individual sweetpotato roots must be raised to 116.6 °F (47 °C).

(4) After the core temperature of the sweetpotato roots reaches 116.6 °F (47 °C), the core temperature must then be held at 116.6 °F (47 °C) or higher for 190 minutes.

■ 7. Section 305.31 is amended as follows:

■ a. By revising the section heading to read as set forth below.

■ b. By revising paragraph (a), including the table, to read as set forth below.

■ c. By redesignating paragraph (g)(2) as paragraph (g)(3) and adding a new paragraph (g)(2) to read as set forth below.

■ d. In paragraphs (b), (e)(1), (e)(2), (f)(1)(i), (f)(1)(ii), (f)(1)(iii), (g) introductory text, (g)(1), and (n), and in newly redesignated paragraphs (g)(3) introductory text, (g)(3)(i) introductory text, and (g)(3)(ii) introductory text, by removing the words “fruits and vegetables” each time they appear and

adding the word “articles” in their place.

■ e. In newly designated paragraph (g)(3)(i)(A), footnote 3, and in paragraph (l), by removing the words “Inspection and” and adding the words “Science and” in their place and by removing the words “1017 Main Campus Drive, suite 2500” and adding the words “1730 Varsity Drive, Suite 400” in their place.

The revisions and additions read as follows:

§ 305.31 Irradiation treatment of imported regulated articles for certain plant pests.

(a) *Approved doses.* Irradiation at the following doses for the specified plant pests, carried out in accordance with the provisions of this section, is approved as a treatment for all regulated articles (i.e., fruits, vegetables, cut flowers, and foliage):

IRRADIATION FOR CERTAIN PLANT PESTS IN IMPORTED REGULATED ARTICLES¹

Scientific name	Common name	Dose (gray)
<i>Anastrepha ludens</i>	Mexican fruit fly	70
<i>Anastrepha obliqua</i>	West Indian fruit fly	70
<i>Anastrepha serpentina</i>	Sapote fruit fly	100
<i>Anastrepha suspensa</i>	Caribbean fruit fly	70
<i>Bactrocera jarvisi</i>	Jarvis fruit fly	100
<i>Bactrocera tryoni</i>	Queensland fruit fly	100
<i>Brevipalpus chilensis</i>	False red spider mite	300
<i>Conotrachelus nenuphar</i>	Plum curculio	92
<i>Crotophlebia ombrodelta</i>	Litchi fruit moth	250
<i>Cryptophlebia illepidia</i>	Koa seedworm	250
<i>Cylas formicarius elegantulus</i>	Sweetpotato weevil	150
<i>Cydia pomonella</i>	Codling moth	200
<i>Euscepes postfasciatus</i>	West Indian sweetpotato weevil	150
<i>Grapholita molesta</i>	Oriental fruit moth	200
<i>Omphisa anastomosalis</i>	Sweetpotato vine borer	150
<i>Rhagoletis pomonella</i>	Apple maggot	60
<i>Sternochetus mangiferae</i> (Fabricus)	Mango seed weevil	300
Fruit flies of the family <i>Tephritidae</i> not listed above		150
Plant pests of the class <i>Insecta</i> not listed above, except pupae and adults of the order <i>Lepidoptera</i>		400

¹ There is a possibility that some cut flowers could be damaged by such irradiation. See paragraph (n) of this section.

* * * *

(g) * * *

(2) For all articles to be irradiated upon arrival in the United States, the articles must be packed in cartons that

have no openings that will allow the entry of fruit flies and that are sealed with seals that will visually indicate if

the cartons have been opened. They may be constructed of any material that prevents the entry of fruit flies and prevents oviposition by fruit flies into the fruit in the carton.

* * * * *

§ 305.32 [Amended]

■ 8. Section 305.32 is amended as follows:

■ a. In paragraphs (a)(1) and (d), by removing the words “a minimum absorbed ionizing radiation dose of 150 Gray (15 krad)” and adding the words “the approved dose for Mexican fruit fly listed in § 305.31(a)” in their place.

■ b. In paragraph (e)(2), by removing the words “150 Gray (15 krad)” and adding the words “the approved dose for Mexican fruit fly listed in § 305.31(a)” in their place.

■ c. In paragraph (g), by removing the words “Oxford Plant Protection Center, 901 Hillsboro St., Oxford, NC 27565” and adding the words “Center for Plant Health Science and Technology, 1730 Varsity Drive, Suite 400, Raleigh, NC 27606” in their place.

§ 305.33 [Amended]

■ 9. Section 305.33 is amended as follows:

■ a. In paragraphs (a)(1) and (d), by removing the words “a minimum absorbed ionizing radiation dose of 225 Gray (22.5 krad)” and adding the words “the approved dose for Mediterranean fruit fly listed in § 305.31(a)” in their place.

■ b. In paragraph (e)(2), by removing the words “225 gray (22.5 krad)” and adding the words “the approved dose for Mediterranean fruit fly listed in § 305.31(a)” in their place.

■ c. In paragraph (g), by removing the words “Oxford Plant Protection Center, 901 Hillsboro St., Oxford, NC 27565” and adding the words “Center for Plant Health Science and Technology, 1730 Varsity Drive, Suite 400, Raleigh, NC 27606” in their place.

■ 10. Section 305.34 is amended as follows:

■ a. By revising the section heading to read as set forth below.

■ b. By revising paragraph (a), including the table, to read as set forth below.

■ c. In paragraphs (b) introductory text, (b)(1), (b)(2)(ii), and (b)(4), by adding the words “, Puerto Rico, or the U.S. Virgin Islands” after the word “Hawaii” each time it occurs.

■ d. In paragraphs (b) introductory text, (b)(1), (b)(2)(i), (b)(2)(ii), (b)(4)(i), (b)(4)(ii), (b)(5), (b)(7)(i), (b)(7)(ii), and (e), by removing the words “fruits and vegetables” each time they appear and by adding the word “articles” in their place.

■ e. In paragraph (b)(7)(i), by adding two new sentences after the last sentence to read as set forth below.

■ f. In paragraph (b)(7)(ii), by adding two new sentences after the last sentence to read as set forth below.

■ g. In paragraph (c), by removing the words “1017 Main Campus Drive, suite 2500” and adding the words “1730 Varsity Drive, Suite 400” in their place.

■ h. By revising the OMB control number citation at the end of the section to read as set forth below.

The revisions and additions read as follows:

§ 305.34 Irradiation treatment of certain regulated articles from Hawaii, Puerto Rico, and the U.S. Virgin Islands.

(a) *Approved irradiation treatment.*

(1) *Commodity-specific doses.*

Irradiation, carried out in accordance with the provisions of this section, is approved as a treatment for the following fruits and vegetables from Hawaii at the specified dose levels:

IRRADIATION FOR PLANT PESTS IN HAWAIIAN FRUITS AND VEGETABLES

Commodity	Dose (gray)
Abiu	150
Atemoya	150
Bell pepper	150
Carambola	150
Eggplant	150
Litchi ¹	150
Longan	150
Mango	300
Papaya	150
Pineapple	150
Rambutan	150
Sapodilla	150
Italian squash	150
Sweetpotato ¹	400 or 150
Tomato	150

(2) *Pest-specific doses.* Any articles from Puerto Rico or the U.S. Virgin Islands, as well as any articles from Hawaii not listed in paragraph (a)(1) of this section, that are required by part 318 of this chapter to be treated or subjected to inspection to control one or more of the plant pests listed in § 305.31(a) may instead be treated with irradiation. Articles treated with irradiation for plant pests listed in § 305.31(a) must be irradiated at the doses listed in § 305.31(a), and the irradiation treatment must be conducted in accordance with the other requirements of this section.

* * * * *

(b) * * *
(7) * * *

¹ Litchi and sweetpotato are also subject to the additional inspection requirements in paragraph (b)(7) of this section.

(i) * * * In addition, sweetpotato from Hawaii to be treated with irradiation at a dose of 150 Gy must be sampled, cut, and inspected in Hawaii and found to be free of the ginger weevil (*Elytrotreinus subtruncatus*) by an inspector before undergoing irradiation treatment in Hawaii. Sampling, cutting, and inspection must be performed under conditions that will prevent any pests that may emerge from the sampled sweetpotatoes from infesting any other sweetpotatoes intended for interstate movement in accordance with this section.

(ii) * * * In addition, sweetpotato from Hawaii to be treated with irradiation at a dose of 150 Gy must be sampled, cut, and inspected in Hawaii and found to be free of the ginger weevil (*Elytrotreinus subtruncatus*) by an inspector. Sampling, cutting, and inspection must be performed under conditions that will prevent any pests that may emerge from the sampled sweetpotatoes from infesting any other sweetpotatoes intended for interstate movement in accordance with this section.

* * * * *

(Approved by the Office of Management and Budget under control numbers 0579-0198 and 0579-0281)

PART 318—HAWAIIAN AND TERRITORIAL QUARANTINE NOTICES

■ 11. The authority citation for part 318 continues to read as follows:

Authority: 7 U.S.C. 7701–7772 and 7781–7786; 7 CFR 2.22, 2.80, and 371.3.

§ 318.13 [Amended]

■ 12. In § 318.13, paragraph (c) is amended by removing the words “leaves in full force and effect § 318.30 which restricts the movement from Hawaii, Puerto Rico, or the Virgin Islands of the United States into or through any other State or certain Territories or Districts of the United States of all varieties of sweetpotatoes (*Ipomoea batatas* Poir.). It also”.

■ 13. Section 318.13–1 is amended as follows:

■ a. In the definition of *compliance agreement*, by removing the words “§ 318.13–3(b), § 318.13–4(b), or § 318.13–4f of this subpart” and adding the words “§ 318.13(b) or § 318.13–4(b) of this subpart or § 305.34 of this chapter” in their place.

■ b. By revising the definition of *inspector* to read as set forth below.

§ 318.13–1 Definitions.

* * * * *

Inspector. Any individual authorized by the Administrator of APHIS or the

Commissioner of Customs and Border Protection, Department of Homeland Security, to enforce the regulations in this part.

* * * * *

§ 318.13-2 [Amended]

■ 14. In § 318.13-2, in paragraph (b), the list of articles is amended by adding, in alphabetical order, a new entry for "Sweetpotato (*Ipomoea batatas* Poir.)."

■ 15. Section 318.13-3 is amended as follows:

■ a. By revising paragraph (b)(3) to read as set forth below.

■ b. By adding a new paragraph (b)(4) to read as set forth below.

§ 318.13-3 Conditions of movement.

* * * * *

(b) * * *

(3) Untreated regulated articles from Hawaii may be moved interstate for irradiation treatment on the mainland United States if the provisions of § 305.34 of this chapter are met and if the articles are accompanied by a limited permit issued by an inspector in accordance with § 318.13-4(c). Untreated bananas from Hawaii may be moved interstate for irradiation treatment on the mainland United States if the provisions of § 318.13-4i(b) are met and if the bananas are accompanied by a limited permit issued by an inspector in accordance with § 318.13-4(c). The limited permit will be issued only if the inspector examines the shipment and determines that the shipment has been prepared in compliance with the provisions of this subpart.

(4) Untreated sweetpotatoes from Hawaii may be moved interstate for vapor heat treatment on the mainland United States if the provisions of § 318.13-4d are met and if the sweetpotatoes are accompanied by a limited permit issued by an inspector in accordance with § 318.13-4(c). The limited permit will be issued only if the inspector examines the shipment and determines that the shipment has been prepared in compliance with the provisions of this subpart.

* * * * *

§ 318.13-4b [Amended]

■ 16. Section 318.13-4b is amended as follows:

■ a. By adding the words "or vegetables" after the word "fruits" in the following places:

i. The section heading.

ii. Paragraph (a).

iii. Paragraph (b), in the paragraph heading and the first sentence.

iv. Paragraph (c).

v. Paragraph (e).

vi. Paragraph (f).

■ b. In paragraph (b), by removing the words "fruit flies" and adding the words "plant pests" in their place.

■ c. In paragraph (b), by adding the word "sweetpotatoes," after the word "rambutan,".

■ 17. A new § 318.13-4d is added to read as follows:

§ 318.13-4d Vapor heat treatment of sweetpotatoes from Hawaii.

(a) Vapor heat treatment, carried out in accordance with the provisions of this section, is approved as a treatment for sweetpotato from Hawaii.

(b) Sweetpotatoes may be moved interstate from Hawaii in accordance with this section only if the following conditions are met:²

(1) The sweetpotatoes must be treated in accordance with the vapor heat treatment schedule specified in § 305.24.

(2) The sweetpotatoes must be sampled, cut, and inspected and found to be free of the ginger weevil (*Elytrotreinus subtruncatus*). Sampling, cutting, and inspection must be performed under conditions that will prevent any pests that may emerge from the sampled sweetpotatoes from infesting any other sweetpotatoes intended for interstate movement in accordance with this section.

(3) The sweetpotatoes must be inspected and found to be free of the gray pineapple mealybug (*Dysmicoccus neobrevipes*) and the Kona coffee-root knot nematode (*Meloidogyne konaensis*).

(4)(i) Sweetpotatoes that are treated in Hawaii must be packaged in the following manner:

(A) The cartons must have no openings that will allow the entry of fruit flies and must be sealed with seals that will visually indicate if the cartons have been opened. They may be constructed of any material that prevents the entry of fruit flies and prevents oviposition by fruit flies into the fruit in the carton.³

(B) The pallet-load of cartons must be wrapped before it leaves the treatment facility in one of the following ways:

(1) With polyethylene sheet wrap;

(2) With net wrapping; or

(3) With strapping so that each carton on an outside row of the pallet load is constrained by a metal or plastic strap.

(C) Packaging must be labeled with treatment lot numbers, packing and treatment facility identification and location, and dates of packing and treatment.

(ii) Cartons of untreated sweetpotatoes that are moving to the mainland United States for treatment must be shipped in shipping containers sealed prior to interstate movement with seals that will visually indicate if the shipping containers have been opened.

(5)(i) *Certification on basis of treatment.* A certificate shall be issued by an inspector for the movement of sweetpotatoes from Hawaii that have been treated and handled in Hawaii in accordance with this section. To be certified for interstate movement under this section, sweetpotato from Hawaii must be sampled, cut, and inspected by an inspector and found by an inspector to be free of the ginger weevil (*Elytrotreinus subtruncatus*) and inspected and found by an inspector to be free of the gray pineapple mealybug (*Dysmicoccus neobrevipes*), and the Kona coffee-root knot nematode (*Meloidogyne konaensis*) before undergoing vapor heat treatment in Hawaii.

(ii) *Limited permit.* A limited permit shall be issued by an inspector for the interstate movement of untreated sweetpotato from Hawaii for treatment on the mainland United States in accordance with this section. To be eligible for a limited permit under this section, untreated sweetpotato from Hawaii must be sampled, cut, and inspected in Hawaii by an inspector and found by an inspector to be free of the ginger weevil (*Elytrotreinus subtruncatus*) and inspected and found by an inspector to be free of the gray pineapple mealybug (*Dysmicoccus neobrevipes*), and the Kona coffee-root knot nematode (*Meloidogyne konaensis*).

(Approved by the Office of Management and Budget under control number 0579-0281)

■ 18. Section 318.13-4f is revised to read as follows:

§ 318.13-4f Irradiation treatment of certain regulated articles from Hawaii.

Irradiation, carried out in accordance with the provisions in § 305.34 of this chapter, is approved as a treatment for the following fruits and vegetables: Abiu, atemoya, bell pepper, carambola, eggplant, litchi, longan, mango, papaya, pineapple, rambutan, sapodilla, Italian squash, sweetpotato, and tomato. Any

² Sweetpotatoes may also be moved interstate from Hawaii in accordance with § 305.34 of this chapter or after fumigation with methyl bromide according to treatment schedule T-101-b-3-1, as provided for in § 305.6(a) of this chapter.

³ If there is a question as to the adequacy of a carton, send a request for approval of the carton, together with a sample carton, to the Animal and Plant Health Inspection Service, Plant Protection and Quarantine, Center for Plant Health Science and Technology, 1730 Varsity Drive, Suite 400, Raleigh, NC 27606.

other commodities that are required by this subpart to be treated or subjected to inspection to control one or more of the plant pests listed in § 305.31(a) of this chapter may instead be treated with irradiation. Commodities treated with irradiation for plant pests listed in § 305.31(a) must be irradiated at the doses listed in § 305.31(a), and the irradiation treatment must be conducted in accordance with the other requirements of § 305.34.

■ 19. Section 318.13–4i is amended as follows:

■ a. By revising the section heading to read as set forth below.

■ b. By redesignating paragraphs (a), (b), (c), and (d) as paragraphs (a)(1), (a)(2), (a)(3), and (a)(4), respectively, and by designating the introductory text of the section as paragraph (a), introductory text.

■ c. By adding a new paragraph (b) to read as set forth below.

§ 318.13–4i Conditions governing the movement of bananas from Hawaii.

* * * * *

(b) Bananas of any cultivar or ripeness that do not meet the conditions of paragraph (a) of this section may also be moved interstate from Hawaii in accordance with the following conditions:

(1) The bananas are irradiated at the minimum dose listed in § 305.31(a) of this chapter and in accordance with the other requirements in § 305.34 of this chapter for the Mediterranean fruit fly (*Ceratitis capitata*), the melon fruit fly (*Bactrocera curcurbitae*), the Oriental fruit fly (*Bactrocera dorsalis*), and the green scale (*Coccus viridis*) and are inspected, after removal from the stalk, in Hawaii and found to be free of the banana moth (*Opogona sacchari* (Bojen)) by an inspector before or after undergoing irradiation treatment; or

(2) The bananas are irradiated at the minimum dose listed in § 305.31(a) of this chapter and in accordance with the other requirements in § 305.34 of this chapter for the Mediterranean fruit fly (*Ceratitis capitata*), the melon fruit fly (*Bactrocera curcurbitae*), and the Oriental fruit fly (*Bactrocera dorsalis*) and are inspected, after removal from the stalk, in Hawaii and found to be free of the green scale (*Coccus viridis*) and the banana moth (*Opogona sacchari* (Bojen)) before or after undergoing irradiation treatment.

(3)(i) A certificate shall be issued by an inspector for the movement of bananas from Hawaii that have been treated and inspected in Hawaii in accordance with this paragraph § 318.13–4i(b). To be certified for interstate movement under this

paragraph, bananas from Hawaii must be treated, inspected, and, if necessary, culled in accordance with the requirements of this paragraph prior to interstate movement from Hawaii.

(ii) A limited permit shall be issued by an inspector for the interstate movement of untreated bananas from Hawaii for treatment on the mainland United States in accordance with this section. To be eligible for a limited permit under this paragraph § 318.13–4i(b), bananas from Hawaii must be inspected in accordance with the requirements of this paragraph prior to interstate movement from Hawaii.

§ 318.13–5 [Amended]

■ 20. In § 318.13–5, footnote 6 is redesignated as footnote 4.

§ 318.13–12 [Amended]

■ 21. In § 318.13–12, footnotes 7 and 8 are redesignated as footnotes 5 and 6, respectively.

§ 318.13–17 [Amended]

■ 22. In § 318.13–17, footnotes 9 and 10 are redesignated as footnotes 7 and 8, respectively.

Subpart—Sweetpotatoes [Removed]

■ 23. Subpart—Sweetpotatoes, consisting of §§ 318.30 and 318.30a, is removed.

§ 318.58 [Amended]

■ 24. In § 318.58, paragraph (d) is amended by removing the words “leaves in full force and effect § 318.30 which restricts the movement from Hawaii, Puerto Rico, or the Virgin Islands of the United States into or through any other State or certain Territories or Districts of the United States of all varieties of sweetpotatoes (*Ipomoea batatas* Poir.). It also”.

■ 25. In § 318.58–1, the definition of *inspector* is revised to read as follows:

§ 318.58–1 Definitions.

* * * * *

Inspector. Any individual authorized by the Administrator of APHIS or the Commissioner of Customs and Border Protection, Department of Homeland Security, to enforce the regulations in this part.

* * * * *

§ 318.58–2 [Amended]

■ 26. In § 318.58–2, in paragraph (b)(2), the list of articles is amended by adding, in alphabetical order, a new entry for “Sweetpotato (*Ipomoea batatas* Poir.).”

■ 27. A new section § 318.58–4b is added to read as follows:

§ 318.58–4b Irradiation treatment of regulated articles from Puerto Rico and the U.S. Virgin Islands.

Any regulated articles from Puerto Rico or the U.S. Virgin Islands that are required by this subpart to be treated or subjected to inspection to control one or more of the plant pests listed in § 305.31(a) of this chapter may instead be treated with irradiation. Commodities treated with irradiation for plant pests listed in § 305.31(a) must be irradiated at the doses listed in § 305.31(a), and the irradiation treatment must be conducted in accordance with the other requirements of § 305.34.

■ 28. A new section § 318.58–4c is added to read as follows.

§ 318.58–4c Movement of sweetpotatoes from Puerto Rico to certain ports.

Sweetpotatoes from Puerto Rico may be moved interstate to Atlantic Coast ports north of and including Baltimore, MD, if the following conditions are met:

(a) The sweetpotatoes must be certified by an inspector of the Commonwealth of Puerto Rico as having been grown under the following conditions:

(1) Fields in which the sweetpotatoes have been grown must have been given a preplanting treatment with an approved soil insecticide.

(2) Before planting in such treated fields, the sweetpotato draws and vine cuttings must have been dipped in an approved insecticidal solution.

(3) During the growing season an approved insecticide must have been applied to the vines at prescribed intervals.

(b) An inspector of the Commonwealth of Puerto Rico must certify that the sweetpotatoes have been washed.

(c) The sweetpotatoes must be graded by inspectors of the Commonwealth of Puerto Rico in accordance with Puerto Rican standards which do not provide a tolerance for insect infestation or evidence of insect injury and found by such inspectors to comply with such standards prior to movement from Puerto Rico.

(d) The sweetpotatoes must be inspected by an inspector and found to be free of the sweetpotato scarabee (*Euscepes postfasciatus* Fairm.).

PART 319—FOREIGN QUARANTINE NOTICES

■ 29. The authority citation for part 319 continues to read as follows:

Authority: 7 U.S.C. 450, 7701–7772, and 7781–7786; 21 U.S.C. 136 and 136a; 7 CFR 2.22, 2.80, and 371.3.

§ 319.56–2 [Amended]

■ 30. In § 319.56–2, paragraph (k) is amended by removing the words “11 species of fruit flies and one species of seed weevil” and adding the words “plant pests” in their place.

■ 31. Section 319.74–2 is amended as follows by redesignating paragraph (d) as paragraph (e) and by adding a new paragraph (d) to read as follows:

§ 319.74–2 Conditions governing the entry of cut flowers.

* * * * *

(d) *Irradiation.* Cut flowers and foliage that are required under this part to be treated or subjected to inspection to control one or more of the plant pests listed in § 305.31(a) of this chapter may instead be treated with irradiation. Commodities treated with irradiation for plant pests listed in § 305.31(a) must be irradiated at the doses listed in § 305.31(a), and the irradiation treatment must be conducted in accordance with the other requirements of § 305.34 of this chapter. There is a possibility that some cut flowers could be damaged by such irradiation.

* * * * *

Done in Washington, DC, this 20th day of January 2006.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 06–746 Filed 1–26–06; 8:45 am]

BILLING CODE 3410–34–P

NUCLEAR REGULATORY COMMISSION**10 CFR Part 52**

RIN 3150–AH56

AP1000 Design Certification

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC or Commission) is amending its regulations to certify the AP1000 standard plant design. This action is necessary so that applicants or licensees intending to construct and operate an AP1000 design may do so by referencing this regulation [AP1000 design certification rule (DCR)]. The applicant for certification of the AP1000 design was Westinghouse Electric Company, LLC (Westinghouse).

DATES: *Effective Date:* The effective date of this rule is February 27, 2006. The incorporation by reference of certain material specified in this regulation is approved by the Director of the Office

of the Federal Register as of February 27, 2006.

FOR FURTHER INFORMATION CONTACT:

Lauren Quinones-Navarro or Jerry N. Wilson, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone (301) 415–2007 or (301) 415–3145; e-mail: *lnq@nrc.gov* or *jnw@nrc.gov*.

SUPPLEMENTARY INFORMATION:**I. Background.****II. Comment Analysis**

- A. Design Control Document
- B. Design Certification Rule
- III. Section-by-Section Analysis
 - A. Introduction (Section I)
 - B. Definitions (Section II)
 - C. Scope and Contents (Section III)
 - D. Additional Requirements and Restrictions (Section IV)
 - E. Applicable Regulations (Section V)
 - F. Issue Resolution (Section VI)
 - G. Duration of this Appendix (Section VII)
 - H. Processes for Changes and Departures (Section VIII)
 - I. Inspections, Tests, Analyses, and Acceptance Criteria (Section IX)
 - J. Records and Reporting (Section X)
- IV. Availability of Documents
- V. Voluntary Consensus Standards
- VI. Finding of No Significant Environmental Impact: Availability
- VII. Paperwork Reduction Act Statement
- VIII. Regulatory Analysis
- IX. Regulatory Flexibility Certification
- X. Backfit Analysis
- XI. Congressional Review Act

I. Background

Subpart B of 10 CFR part 52 sets forth the process for obtaining standard design certifications. On March 28, 2002 (67 FR 20845; April 26, 2002), Westinghouse tendered its application for certification of the AP1000 standard plant design with the NRC. Westinghouse submitted this application in accordance with subpart B and appendix O of 10 CFR part 52. The NRC formally accepted the application as a docketed application for design certification (Docket No. 52–006) on June 25, 2002 (67 FR 43690; June 28, 2002). The pre-application information submitted before the NRC formally accepted the application can be found in the NRC’s Agencywide Documents Access and Management System (ADAMS) under Docket Number PROJ0711 (Project No. 711).

The NRC staff issued a final safety evaluation report (FSER) for the AP1000 design in September 2004 (NUREG–1793). The FSER provides the bases for issuance of a final design approval (FDA) under appendix O to part 52, which is a prerequisite to a design certification. The FDA for the AP1000 design was issued on September 13,

2004, and published in the **Federal Register** on September 17, 2004 (69 FR 56101). A proposed rule to certify the AP1000 was published on April 18, 2005 (70 FR 20062).

Subsequently, Westinghouse submitted editorial and minor technical changes and clarifications to the inspections, tests, analyses, and acceptance criteria (ITAAC) in revision 15 to the design control document (DCD). The NRC staff evaluated these changes in a supplement to the FSER (NUREG–1793, Supplement No. 1). Supplement No. 1 is being made available to the public as part of this rulemaking. The FSER and Supplement No. 1 provide the bases for the Commission’s approval of the AP1000 standard plant design. An FDA, which incorporates the changes to the DCD, will be issued to supersede the current FDA after issuance of this final design certification rule.

II. Comment Analysis

The period for submitting comments on the proposed DCR, AP1000 DCD, or draft environmental assessment (EA) expired on July 5, 2005. The NRC received three letters from two private citizens and one letter from the Nuclear Energy Institute (NEI). The comments addressed three categories of information: Environmental Assessment (EA), Design Control Document, and Design Certification Rule. The responses to the comments on the EA are discussed in section 7.0 of the EA (ML053630176). Responses to the comments in the second and third categories are discussed below.

A. Design Control Document (DCD)

Comment summary. There is an over-reliance on passive systems in the AP1000.

Response. The NRC disagrees with this comment. The NRC required tests of the new passive safety systems to demonstrate that they will perform as predicted in the safety analysis (see Chapter 21 of the AP1000 FSER). The NRC also required higher availability for certain active backup systems to compensate for any remaining uncertainties in the performance of the passive safety systems (see Chapter 22 of the AP1000 FSER). As a result of these reviews, the NRC concluded that the use of passive safety systems in the AP1000 design is acceptable.

Comment Summary. The AP1000 is an unnecessary and unsafe variation on AP600.

Response. The NRC disagrees with the comment. The NRC has determined that the AP1000 design can be built and operated safely (see AP1000 FSER). The

Tennessee Highway 130 to Snell Road; then southeast on Snell Road to U.S. Highway 231; then south on U.S. Highway 231 to the Lincoln/Moore/Bedford County line.

Blount County. That portion of the county lying south of a line beginning at the intersection of the Loudon/Blount County line and U.S. Highway 321; then east on U.S. Highway 321 to Marble Hill Road; then southeast on Marble Hill Road to Gulf Hollow Road; then south on Gulf Hollow Road to Kirk Road; then east on Kirk Road to Meadow Road; then northeast on Meadow Road to Lambert Road; then southeast on Lambert Road to Salem Road; then south on Salem Road to Morgantown Road; then northeast on Morgantown Road to Springview Road; then southeast on Springview Road to Old Niles Ferry Road; then southwest on Old Niles Ferry Road to Gillen Water Road; then southeast on Gillen Water Road to U.S. Highway 129; then south on U.S. Highway 129 to Baumgardner Road; then east on Baumgardner Road to Mint Road; then northeast on Mint Road to Knob Road; then southeast on Knob Road to Sixmile Road; then south along an imaginary line to U.S. Highway 129; then southeast on U.S. Highway 129 to the Tennessee/North Carolina State line.

* * * * *

Coffee County. That portion of the county lying south of a line beginning at the intersection of the Bedford/Coffee County line and the line of latitude 35° 25' North; then east on the line of latitude 35° 25' North to Arnold Center Road; then south on Arnold Center Road to Miller Crossroad Road; then southeast on Miller Crossroad Road to Prairie Plains Road; then north on Prairie Plains Road to Lonnie Bush Road; then northeast on Lonnie Bush Road to U.S. Highway 41; then southeast on U.S. Highway 41 to the Coffee/Grundy County line; also the entire city limits of Tullahoma, TN.

Decatur County. The entire county.

* * * * *

Franklin County. The entire county.

* * * * *

Grundy County. That portion of the county lying south of a line beginning at the intersection of the Coffee/Grundy County line and U.S. Highway 41; then southeast on U.S. Highway 41 to Tennessee Highway 50; then east on Tennessee Highway 50 to Homer White Road; then north on Homer White Road to Tennessee Highway 50; then northeast on Tennessee Highway 50 to Tennessee Highway 108; then east on Tennessee Highway 108 to Tennessee Highway 399; then northeast on Tennessee Highway 399 to Bryant Road;

then southeast on Bryant Road to the Grundy/Sequatchie County line.

* * * * *

Loudon County. That portion of the county lying south of a line beginning at the intersection of the Roane/Loudon County line and the Tennessee River; then east along the Tennessee River to the Fort Loudon Dam (U.S. Highway 321); then northwest on U.S. Highway 321 to Martel Road; then northeast on Martel Road to the Loudon/Knox County line.

* * * * *

Maury County. That portion of the county lying south of a line beginning at the intersection of the Lewis/Maury County line and U.S. Highway 412; then east on U.S. Highway 412 to Cecil Farm Road; then east on Cecil Farm Road to South Cross Bridges Road; then south on South Cross Bridges Road to Mt. Pleasant Road; then south on Mt. Pleasant Road to Tennessee Highway 166; then southeast on Tennessee Highway 166 to Tennessee Highway 243; then south on Tennessee Highway 243 to Dry Creek Road; then south on Dry Creek Road to the Maury/Lawrence County Line.

* * * * *

Monroe County. The entire county.

* * * * *

Done in Washington, DC, this 30th day of January 2003.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 03-2685 Filed 2-4-03; 8:45 am]

BILLING CODE 3410-34-P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Part 318

[Docket No. 00-052-2]

Fruits and Vegetables From Hawaii

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are amending the regulations to allow bell peppers, eggplant, mangoes, pineapple (other than smooth Cayenne), Italian squash, and tomatoes to be moved interstate from Hawaii if the fruits and vegetables undergo irradiation treatment at an approved facility. Treatment may be conducted either in Hawaii or in areas of the mainland United States where tropical fruit flies are not likely to become established. The fruits and

vegetables will also have to meet certain additional requirements, including packaging requirements. This action relieves restrictions on the movement of these fruits and vegetables from Hawaii while continuing to provide protection against the spread of plant pests from Hawaii to other parts of the United States.

EFFECTIVE DATE: February 5, 2003.

FOR FURTHER INFORMATION CONTACT: Mr. Hesham A. Abuelnaga, Import Specialist, Phytosanitary Issues Management Team, PPQ, APHIS, 4700 River Road Unit 140, Riverdale, MD 20737-1236; (301) 734-5334.

SUPPLEMENTARY INFORMATION:

Background

The Hawaiian Fruits and Vegetables regulations, contained in 7 CFR 318.13 through 318.13-17 (referred to below as the regulations), govern, among other things, the interstate movement of fruits and vegetables from Hawaii. Regulation is necessary to prevent the spread of dangerous plant diseases and pests that occur in Hawaii.

The regulations in § 318.13-4f allow abiu, atemoya, carambola, litchi, longan, papaya, rambutan, and sapodilla to be moved interstate from Hawaii if, among other things, the fruits and vegetables undergo irradiation treatment in accordance with that section.

On May 22, 2002, we published in the **Federal Register** (67 FR 35932-35936, Docket No. 00-052-1) a proposal to amend the regulations to allow bell peppers, eggplant, mangoes, pineapple (other than smooth Cayenne), Italian squash, and tomatoes to be moved interstate from Hawaii if treated with irradiation in accordance with the requirements in § 318.13-4f. The proposal was prompted by research by the Department's Agricultural Research Service (ARS) that showed that this irradiation treatment could eliminate infestations of fruit flies and other pests in those commodities. In that same document, we also proposed to amend the irradiation regulations to require cartons of fruits and vegetables that are being moved interstate in accordance with the regulations to be marked with irradiation indicators.

We solicited comments concerning our proposal for 60 days ending July 22, 2002. We received six comments by that date. The comments were from researchers, a manufacturer of irradiation equipment, and representatives of a State government. The commenters generally supported the proposal. However, four commenters expressed concern over the proposed requirement for the use of

irradiation indicators. Also, another commenter raised concerns about including mangoes on the list of fruits approved for movement from Hawaii if treated with irradiation. These comments are discussed below by topic.

Irradiation Indicators

We proposed to amend the irradiation provisions in § 318.13–4f to require cartons of fruits and vegetables being moved interstate in accordance with the regulations to be marked with irradiation indicators. Specifically, we had proposed to add a new § 318.13–4f(b)(7) to read as follows: “*Indicators.* Each carton of fruits and vegetables must bear an indicator device, securely attached prior to irradiation, that changes color or provides another clear visual change when it is exposed to radiation in the dose range required by this section for the pests for which the articles are being treated.” Four commenters opposed this proposed requirement for numerous technical, operational, and cost-benefit reasons.

One commenter referred to several studies that deal with the limitations of available radiation-sensitive indicators.¹ Specifically, the commenter stated that dose fluctuations resulting from density variations caused by the arrangement, size, and weight of individual fruit within the subunits of a pallet would make irradiation indicators impractical and unreliable.

Another commenter stated that the indicators that are currently available have not undergone adequate testing and standard development, and, therefore, their reliability is questionable. In addition, the commenter suggested that the added labor costs for the additional handling must be taken into account, offsetting the low cost of the production of the indicators themselves.

One comment, which was reviewed and submitted by several researchers, offered detailed discussion of several issues related to the use of irradiation indicators. The comment referred to American Society for Testing and Materials (ASTM) Standard E 1539–98, “Standard Guide for the Use of

Radiation-Sensitive Indicators.” Section 7.3 of that document states: “Some irradiation or storage conditions may result in false positive or negative observations. For these reasons, indicators should not be used as a criterion for product release. Also, external environmental influences may make the interpretation of the indicators meaningless outside the irradiation facility unless appropriate controls are used.” The commenter indicated that, for several technical reasons, irradiation indicators can only be used effectively to show that products have been exposed to “some” radiation, and not to show the exact dose of radiation that a product has received.

We have carefully analyzed all the data and opinions submitted recommending against the proposed indicator requirement and have decided to omit that requirement from this final rule. While we believe that an indicator could be employed as a useful “cross check” when Animal and Plant Health Inspection Service (APHIS) inspectors are correlating the required interstate movement certificates with the cartons referred to in those documents to offer additional protection against the introduction of plant pests into the mainland United States from Hawaii, apparently there is no such indicator that is: (1) Currently available at low cost; (2) validated to be sensitive and reliable in the appropriate dose ranges; and (3) validated to be resistant to false positives and false negatives caused by environmental effects. Therefore, we have omitted proposed § 318.13–4f(b)(7) from this final rule.

Dosage Recommendations

One commenter noted that there are only two studies to date that examine the relationship between radiation dose and fertility in the adult mango seed weevil (*Sternonchus mangiferae* (Fabricius), formerly known as *Cryptorhynchus mangiferae*). The commenter stated that these studies do not provide adequate support for the proposed dose of 100 Gy (10 krad), which was recommended by ARS research findings as a sufficient quarantine treatment for mango seed weevil. The commenter suggested that, based on the limited amount of research that has been done, Hawaiian mangoes should be subjected to higher doses of radiation than 100 Gy (10 krad). We had proposed a minimum ionizing irradiation dose of 250 Gy (25 krad) for mangoes, which we indicated would be effective in eliminating both fruit flies and the mango seed weevil.

We have carefully analyzed the data and conducted a review of the available

literature on this topic and have determined that a higher dose of irradiation for mango seed weevil is appropriate. Based on research by ARS (Follett, 1999) and by the International Consultative Group on Food Irradiation of the Food and Agriculture Organization of the United Nations,² we are setting an irradiation dose level of 300 Gy (30 krad) for mango seed weevil in this final rule. We believe that there is enough research and evidence to support this dose level as an effective quarantine treatment for mango seed weevil.

The same commenter also stated that a dose of 250 Gy is excessive for fruit flies. He indicated that “recent research and analyses have demonstrated that studies finding that doses >150 Gy were needed most likely are in error,” but did not identify specific studies or analyses. He asked when APHIS would consider lower doses.

The research supporting this comment may have merit, but such research must be carefully evaluated and verified before we lower doses below the proposed level, which we know is effective. APHIS, in cooperation with ARS and others, will evaluate the lower doses recommended by this commenter. If we determine that lower doses are effective for fruit flies, we will initiate rulemaking in the future to reduce the doses. However, this evaluation process will take time, so in this final rule we are utilizing the dose of 250 Gy for fruit flies so that irradiation treatments may occur while this evaluation is underway.

The same commenter also stated that there should be a range of time given for irradiation treatment the way that a time range is given for vapor heat treatment in the comparison table (see Table 3) in the proposed rule. The commenter also asked if the comparison table compared values for the same amount of fruit in both treatments.

The comparison table was offered in the proposed rule’s economic analysis to illustrate the relative cost and time-saving benefits of irradiation treatments when compared to the presently available vapor heat treatment, not to set specific values for the two treatments. Although the same amount of fruit was used in both treatments, it was not possible to give a time range for irradiation treatment comparable to the time range given for the heat vapor treatment because of the number of

¹ Ehlermann, D.A.E. (Federal Research Centre for Nutrition, Karlsruhe (Germany). Inst. of Process Engineering), “Validation of a label dosimeter for food irradiation applications by subjective and objective means,” Appl. Radiat. Isot.; v. 48(9), p. 1197–1201; 1997.

International Atomic Energy Agency, “Standardized methods to verify absorbed dose in irradiated food for insect control,” IAEA, Vienna, 2001, IAEA–TECDOC–1201.

Razem, D. (Ruder Boskovic Inst., Zagreb (Croatia)), “Dosimetric performance of and environmental effects on sterin irradiation indicator labels,” Radiat. Phys. Chem.; v.49(4), p. 491–495.

² “Irradiation as a Quarantine Treatment of Fresh Fruits and Vegetables,” ICGFI, 1991. This publication also cited two other studies, (Heather and Corcoran, 1990) and (Jessup and Rigney, 1990), that supported an irradiation dose level of 300 Gy (30 krad) for mango seed weevil.

variables involved in the irradiation process. The irradiation exposure times that are necessary to ensure that the specified dose has been delivered and absorbed vary widely by commodity and by equipment, which is available from several different manufacturers of irradiation equipment. The Plant Protection and Quarantine Treatment Manual, which is incorporated by reference in 7 CFR § 300.1, states that irradiation facilities must use ASTM Standard E 1261, "Guide for Selection and Calibration of Dosimetry Systems for Radiation" (or an equivalent international standard) as a guide for selection and calibration of an appropriate dosimetry system that matches the dosimeter requirements specific to their needs, and that irradiation exposure times must be evaluated for each commodity. The necessary dosage levels vary from 150 Gy (15 krad) to 300 Gy (30 krad) based on commodity, and each piece of equipment varies in the amount of time it takes to ensure that these dosage levels have been delivered and absorbed. Any time range given would not be able to take into account all of these possibilities and would therefore be inaccurate. We are not making any changes to the rule based on this comment.

Miscellaneous

The regulations in § 318.13–4f currently specify 250 Gy (25 krad) as the minimum absorbed dose for all treated commodities. Because, as noted above, we are setting the minimum absorbed dose for mangoes at 300 Gy (30 krad), we have amended several paragraphs in § 318.13–4f so that they refer to "the specified dose" rather than to 250 Gy (25 krad).

Therefore, for the reasons given in the proposed rule and in this document, we are adopting the proposed rule as a final rule, with the changes discussed in this document.

Effective Date

This is a substantive rule that relieves restrictions and, pursuant to the provisions of 5 U.S.C. 553, may be made effective less than 30 days after publication in the **Federal Register**.

This rule relieves restrictions on the interstate movement of bell peppers, eggplant, mangoes, pineapple (other

than smooth Cayenne), Italian squash, and tomatoes from Hawaii to the mainland United States. Making this rule effective immediately will allow interested producers, as well as manufacturers of the irradiation equipment that will be used to treat these articles, to benefit from trade as soon as possible. Therefore, the Administrator of the Animal and Plant Health Inspection Service has determined that this rule should be effective upon publication in the **Federal Register**.

Executive Order 12866 and Regulatory Flexibility Act

This rule has been reviewed under Executive Order 12866. The rule has been determined to be not significant for the purposes of Executive Order 12866 and, therefore, has not been reviewed by the Office of Management and Budget.

We are amending the Hawaiian Fruits and Vegetables regulations to allow bell peppers, eggplant, mangoes, pineapple (other than smooth Cayenne), Italian squash, and tomatoes to be moved interstate from Hawaii if they are treated with irradiation in accordance with the regulations in § 318.13–4f. Irradiation at certain dosages eliminates infestations of pests in fruits and vegetables. Irradiation also eliminates bacterial or fungal growth that can otherwise cause accelerated spoilage and result in illness. Bacterial contamination can come from soil, insects, bird or rodent droppings, or the water used in processing.

Effects on Producers and Shippers of Fruits and Vegetables

Since 1995, the amount of land used for commercial production of mangoes in Hawaii has nearly tripled, and more than 7,500 new mango trees have been planted. However, producers in Hawaii have not been able to ship mangoes to the mainland United States due to the presence of the mango seed weevil in Hawaii (the mango seed weevil is not present in the mainland United States).³ The irradiation treatment in this final rule provides an effective quarantine treatment for the mango seed weevil

³ The mango seed weevil attacks mango seeds, but rarely the fruit, and may cause slight fruit drop in production areas. The mango seed weevil poses no threat to other crops or flora. It is strictly monophagous.

that will protect against the introduction and dissemination of this pest into the mainland United States from Hawaii. This final rule opens the mainland U.S. mango market to Hawaiian mangoes.

U.S. production of mangoes has primarily been in southern Florida, with a smaller quantity grown in Hawaii and a negligible amount produced in California. According to the 1997 Census of Agriculture, there were 218 mango farms in Florida, 171 in Hawaii, and 2 in California. The total domestic harvest that year was about 2,829 metric tons, of which about 97 percent was produced in Florida and about 3 percent (approximately 85 metric tons) produced in Hawaii. According to National Agricultural Statistics Service data, Hawaii produced approximately 72 metric tons of mangoes in 1999. It is unlikely that this final rule will result in a significant amount of mangoes being moved from Hawaii to the mainland United States because it is expected that nearly all mangoes produced in Hawaii will continue to be consumed within the State. Further, given that the United States imported 219,000 metric tons of mangoes between September 1998 and August 1999, any movements of Hawaii-grown mangoes to the mainland United States will be insignificant in contrast to the volume of annual imports.

Bell peppers, eggplant, pineapple (other than smooth Cayenne), Italian squash, and tomatoes are currently allowed to move interstate from Hawaii if they are first treated for Mediterranean fruit fly, oriental fruit fly, and melon fly with vapor heat in accordance with § 318.13–4b. Tomatoes may also be moved interstate from Hawaii if they are treated with methyl bromide in accordance with § 318.13–4c. This rule provides for an alternative means of treating bell peppers, eggplant, pineapple (other than smooth Cayenne), Italian squash, and tomatoes from Hawaii for fruit flies and other pests.

Since 1995, Hawaii's production of bell peppers, eggplant, Italian squash, and tomatoes has increased in value and volume (see tables 1 and 2). Hawaii's production of pineapples (other than smooth Cayenne) has decreased by 4 percent, but its value has increased by 6 percent.

TABLE 1.—PRODUCTION OF SELECTED VEGETABLES IN HAWAII

	Year			
	1995	1996	1997	1998
Bell Peppers				
Volume (fresh weight in lbs.)	2,400,000	2,600,000	2,000,000	3,000,000
Value	\$1,392,000	\$1,248,000	\$980,000	\$1,500,000
Eggplant				
Volume (fresh weight in lbs.)	1,200,000	1,300,000	1,500,000	1,300,000
Value	\$984,000	\$949,000	\$1,185,000	\$1,053,000
Pineapples (other than smooth Cayenne)				
Volume (fresh weight in lbs.)	760,594,590	765,003,834	714,297,528	731,934,504
Value	\$87,360,000	\$95,914,000	\$91,721,000	\$92,776,000
Italian Squash				
Volume (fresh weight in lbs.)	620,000	700,000	1,400,000	1,500,000
Value	\$316,000	\$336,000	\$700,000	\$735,000
Tomatoes				
Volume (fresh weight in lbs.)	6,000,000	7,000,000	10,200,000	10,200,000
Value	\$2,910,000	\$3,710,000	\$5,508,000	\$5,610,000

TABLE 2.—CHANGE IN PRODUCTION OF SELECTED VEGETABLES IN HAWAII BETWEEN 1995 AND 1998

	Volume (percent)	Value (percent)
Bell peppers	- 4	+6
Eggplant	+70	+93
Pineapples (other than smooth Cayenne)	+25	+8
Italian squash	+8	+7
Tomatoes	+142	+96

According to the Hawaii Agricultural Census, there were 27 farms growing pineapples for commercial sale in 1997. Twenty-two (or 82 percent) of those farms harvested between 1 and 14 acres of pineapple. During the same year, 74 farms produced tomatoes for commercial sale (a total of 388 acres harvested). There are no official data with respect to the number of farms in Hawaii producing bell peppers, eggplant, and Italian squash during the

same year. However, considering that in 1997 there were 657 farms in Hawaii that harvested fruits and vegetables for sale (90 percent of which had less than 14 acres of crops planted), we believe that the majority of farms producing bell peppers, eggplant, and Italian squash for sale were small according to Small Business Administration (SBA) criteria. It is also likely that the majority of firms shipping bell peppers, eggplant, and

Italian squash interstate from Hawaii are small according to SBA criteria.

Regardless of their size, Hawaii's fruit and vegetable producers and shippers who move fruits and vegetables interstate from Hawaii will benefit from the availability of an additional treatment alternative, especially since this treatment is less time-consuming than the presently available vapor heat treatment (*see* Table 3).

TABLE 3.—COMPARISON OF IRRADIATION AND VAPOR HEAT TREATMENTS

	Irradiation	Vapor heat
Cost	\$0.22 to \$0.33/kg (treatment cost)	\$0.20 to \$0.50/kg
Treatment Time	40 minutes	1.5 to 7 hours

Effects on Treatment Facilities

The irradiation treatments for bell peppers, eggplants, mangoes, pineapples (other than smooth Cayenne), Italian squash, and tomatoes will take place mostly at a new facility that was recently built in Hawaii. However, it is possible that some of

these fruits and vegetables could be shipped to the mainland United States and treated with irradiation at facilities in Illinois or New Jersey. At present, various other tropical fruits, such as papaya, litchi, rambutan, carambola, and atemoya are shipped from Hawaii to a facility in Illinois for cobalt irradiation treatment.

On August 1, 2000, a new x-ray irradiation facility in Hawaii began treating papayas, which, after their x-ray treatment, are commercially shipped to the mainland United States. This facility treats between 500 to 1,000 boxes of papayas per day, 4 days per week.

This facility will be the primary irradiation facility to treat Hawaii-grown

bell peppers, eggplants, mangoes, pineapples (other than smooth Cayenne), Italian squash, and tomatoes before they are moved interstate. However, if there is not enough capacity at the Hawaiian plant for the fruits to be irradiated, the fruits can be sent for treatment to any of the three irradiation treatment facilities on the mainland United States.

According to SBA criteria, the facility in Hawaii mentioned in the previous paragraphs is a small entity (*i.e.*, an entity with annual sales of less than \$5 million). Another firm that provides irradiation treatments for fruits and vegetables owns two irradiation facilities in Illinois and one facility in New Jersey. This other firm, which primarily provides irradiation treatment to sanitize medical devices, is not a small entity according to SBA criteria.

This final rule benefits the Hawaiian treatment facility, and may benefit the mainland facilities if the Hawaiian facility cannot keep up with demand for treatment of fruits and vegetables moving interstate from Hawaii. The final rule could also potentially benefit U.S. mainland consumers by increasing the mainland's supply of those fruits and vegetables that will now be eligible for interstate movement with irradiation treatment.

Under these circumstances, the Administrator of the Animal and Plant Health Inspection Service has determined that this action will not have a significant economic impact on a substantial number of small entities.

Executive Order 12372

This program/activity is listed in the Catalog of Federal Domestic Assistance under No. 10.025 and is subject to Executive Order 12372, which requires intergovernmental consultation with State and local officials. (*See* 7 CFR part 3015, subpart V.)

Executive Order 12988

This final rule has been reviewed under Executive Order 12988, Civil Justice Reform. This rule: (1) Preempts all State and local laws and regulations that are inconsistent with this rule; (2) has no retroactive effect; and (3) does not require administrative proceedings before parties may file suit in court challenging this rule.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the information collection or recordkeeping requirements included in this rule have been approved by the Office of Management and Budget (OMB) under OMB control number

0579-0198. Government Paperwork Elimination Act Compliance

The Animal and Plant Health Inspection Service is committed to compliance with the Government Paperwork Elimination Act (GPEA), which requires Government agencies in general to provide the public the option of submitting information or transacting business electronically to the maximum extent possible. For information pertinent to GPEA compliance related to this rule, please contact Mrs. Celeste Sickles, APHIS' Information Collection Coordinator, at (301) 734-7477.

List of Subjects in 7 CFR Part 318

Cotton, Cottonseeds, Fruits, Guam, Hawaii, Plant diseases and pests, Puerto Rico, Quarantine, Transportation, Vegetables, Virgin Islands.

Accordingly, we are amending 7 CFR part 318 as follows:

PART 318—HAWAIIAN AND TERRITORIAL QUARANTINE NOTICES

1. The authority citation for part 318 continues to read as follows:

Authority: 7 U.S.C. 7711, 7712, 7714, 7731, 7754, and 7756; 7 CFR 2.22, 2.80, and 371.3.

2. Section 318.13-4f is amended as follows:

a. By revising paragraphs (a), (b)(2)(i), (b)(5), and (b)(6)(ii) to read as set forth below.

b. By adding, at the end of the section, the following: "(Approved by the Office of Management and Budget under control number 0579-0198)".

§ 318.13-4f Administrative instructions prescribing methods for irradiation treatment of certain fruits and vegetables from Hawaii.

(a) *Approved irradiation treatment.* Irradiation, carried out in accordance with the provisions of this section, is approved as a treatment for the following fruits and vegetables at the specified dose levels:

IRRADIATION FOR FRUIT FLIES AND SEED WEEVILS IN HAWAIIAN FRUITS AND VEGETABLES

Fruit	Dose (gray)
Abiu	250
Atemoya	250
Bell pepper	250
Carambola	250
Eggplant	250
Litchi	250
Longan	250
Mango	300
Papaya	250
Pineapple (other than smooth Cayenne)	250

IRRADIATION FOR FRUIT FLIES AND SEED WEEVILS IN HAWAIIAN FRUITS AND VEGETABLES—Continued

Fruit	Dose (gray)
Rambutan	250
Sapodilla	250
Italian squash	250
Tomato	250

* * * * *

(b) * * *

(2) * * *

(i) Be capable of administering the minimum absorbed ionizing radiation doses specified in paragraph (a) of this section to the fruits and vegetables;²

* * * * *

(5) *Dosage.* The fruits and vegetables must receive the minimum absorbed ionizing radiation dose specified in paragraph (a) of this section.⁵

(6) * * *

(ii) Absorbed dose must be measured using a dosimeter that can accurately measure the absorbed doses specified in paragraph (a) of this section.

* * * * *

Done in Washington, DC this 30th day of January 2003.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 03-2681 Filed 2-4-03; 8:45 am]

BILLING CODE 3410-34-P

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Part 318

[Docket No. 01-042-2]

Interstate Movement of Gardenia From Hawaii

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are amending the Hawaiian fruits and vegetables regulations to provide for the movement of cut blooms of gardenia from Hawaii. We have determined that specific growing and inspection protocols can effectively mitigate the plant pest risks associated with gardenia grown in Hawaii. This action provides for the interstate movement of gardenia from

² The maximum absorbed ionizing radiation dose and the irradiation of food is regulated by the Food and Drug Administration under 21 CFR part 179.

⁵ See footnote 2.

Rules and Regulations

Federal Register

Vol. 69, No. 32

Wednesday, February 18, 2004

This section of the FEDERAL REGISTER contains regulatory documents having general applicability and legal effect, most of which are keyed to and codified in the Code of Federal Regulations, which is published under 50 titles pursuant to 44 U.S.C. 1510.

The Code of Federal Regulations is sold by the Superintendent of Documents. Prices of new books are listed in the first FEDERAL REGISTER issue of each week.

DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Part 318

[Docket No. 03-062-2]

Irradiation of Sweetpotatoes From Hawaii

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Affirmation of interim rule as final rule.

SUMMARY: We are adopting as a final rule, without change, an interim rule that amended the regulations to provide for the use of irradiation as a treatment for sweetpotatoes to be moved interstate from Hawaii. The interim rule also provided that the sweetpotatoes have to meet certain additional requirements, including inspection and packaging requirements. The interim rule provided for the use of irradiation as an alternative to methyl bromide for the treatment of sweetpotatoes moving interstate from Hawaii.

EFFECTIVE DATE: The interim rule became effective on June 26, 2003.

FOR FURTHER INFORMATION CONTACT: Dr. Inder P. Gadh, Import Specialist, Phytosanitary Issues Management Team, PPQ, APHIS, 4700 River Road, Unit 140, Riverdale, MD 20737-1236; (301) 734-6799.

SUPPLEMENTARY INFORMATION:

Background

The regulations in 7 CFR part 318 prohibit or restrict the interstate movement of fruits, vegetables, and certain other articles from Hawaii, Puerto Rico, the U.S. Virgin Islands, and Guam to prevent the introduction and dissemination of plant pests into the continental United States.

Within part 318, "Subpart—Sweetpotatoes" (§§ 318.30 and 318.30a,

referred to below as the regulations) quarantines Hawaii, Puerto Rico, and the U.S. Virgin Islands because of the sweetpotato scarabee (*Euscepes postfasciatus* Fairm. [Coleoptera: Curculionidae], also known as the West Indian sweetpotato weevil) and the sweetpotato stem borer (*Omphisa anastomosalis* Guen. [Lepidoptera: Crambidae], also known as the sweetpotato vine borer) and restricts the interstate movement of sweetpotatoes (*Ipomoea batatas* Poir.) from those places.

In an interim rule effective and published in the **Federal Register** on June 26, 2003 (68 FR 37931-37936, Docket No. 03-062-1), we amended the regulations governing the interstate movement of sweetpotatoes from Hawaii by providing for the use of irradiation as a treatment for sweetpotatoes to be moved interstate from Hawaii. The interim rule provided that the sweetpotatoes must be irradiated at a dose of 400 Gy (40 krad) and must also meet certain additional requirements, including inspection and packaging requirements. The interim rule provided an alternative to fumigation with methyl bromide for the treatment of Hawaiian sweetpotatoes.

Comments on the interim rule were required to be received on or before August 25, 2003. We received three comments by that date. The comments were from an entomologist, a public interest group, and an industry association. The comments are discussed below by topic.

General Comments

One commenter noted that sweetpotato growers in the mainland United States have made continuing efforts to control insect pests that affect their production of sweetpotatoes, such as wire worms, cucumber beetle, flea beetle, grubs, fusarium, pox, and nematodes. This commenter further noted that sweetpotato breeders are working to develop varieties of sweetpotato that are resistant to these pests. The commenter recommended that, rather than risk the introduction of new pests of sweetpotatoes into the mainland United States, the Hawaiian growers interested in moving their sweetpotatoes interstate contract with sweetpotato breeders to develop varieties of sweetpotato that are resistant to the pests named in the pest

risk assessment (PRA) that we conducted as a basis for the interim rule.

Prior to the interim rule, sweetpotatoes from Hawaii were allowed to move interstate if they had been fumigated with methyl bromide to mitigate the risks identified in the PRA. The interim rule simply provided sweetpotato growers with an alternative treatment, irradiation, that we believe is equally effective at mitigating the same risks. Hawaiian sweetpotato growers are free to develop varieties of sweetpotato that are resistant to sweetpotato pests present in Hawaii, but the Animal and Plant Health Inspection Service (APHIS) has no authority to compel them to do so. We believe that both fumigation and irradiation effectively mitigate the risk of pest introduction associated with the interstate movement of sweetpotatoes from Hawaii. We are making no changes in response to this comment.

One commenter pointed out two spelling errors in the preamble of the interim rule and requested two other nonsubstantive clarifications to language in the preamble. Because these comments do not affect the regulatory language we established in the interim rule, we are making no changes to the interim rule in response to these comments. However, we have corrected the spelling of the previously misspelled terms and used the clarifications suggested by the commenter in the discussion of comments below.

Risk Mitigation Measures

One commenter objected to the inclusion of the ginger weevil (*Elytroteinus subtruncatus* [Coleoptera: Curculionidae]) on the list of quarantine pests associated with the interstate movement of sweetpotato from Hawaii. (The PRA that was the basis for the interim rule included the ginger weevil as a quarantine pest associated with such movement because it had been found as a hitchhiker on sweetpotato from Hawaii.) This commenter stated that the ginger weevil has not been documented as a pest of sweetpotato and that the interception data did not provide a sufficient basis for including the ginger weevil as a quarantine pest associated with the interstate movement of sweetpotato from Hawaii.

As the PRA stated, we do not have evidence that can confirm that sweetpotatoes do not serve as a host for

the ginger weevil. In any case, fumigation with methyl bromide or the alternative irradiation treatment provided by the interim rule remains necessary to neutralize the sweetpotato scarabee and the sweetpotato stem borer, whose association with the interstate movement of sweetpotatoes from Hawaii this commenter did not dispute. Therefore, we are making no changes to the alternative irradiation treatment provided for by the interim rule in response to this comment.

One commenter requested that we clarify the meaning of the term "neutralize" as it applies to the effects of irradiation treatment on plant pests.

A pest is considered to have been neutralized by a treatment if the treatment has prevented the pest from establishing itself in an area where it is not currently present. For irradiation treatment, neutralizing a pest generally refers to either sterilizing the pest or preventing it from achieving sexual maturity, although irradiation treatment can in some cases kill pests that may be present.

Two commenters objected to the fact that the interim rule was promulgated before specific research was completed to determine the dose necessary to neutralize the three pests that the PRA identified as targets for treatment: The ginger weevil, the sweetpotato scarabee, and the sweetpotato stem borer. One commenter pointed out that, although we based the dose of 400 Gy required by the interim rule on estimated minimum absorbed doses in the International Plant Protection Convention (IPPC) Guidelines for the Use of Irradiation as a Phytosanitary Measure (ISPM Publication No. 18), the research from which these estimated minimum absorbed doses were developed does not provide specific doses for neutralizing the ginger weevil or the sweetpotato stem borer. Both commenters requested that APHIS prohibit the treatment of sweetpotatoes moved interstate from Hawaii with irradiation until pest-specific research has been completed.

APHIS published a notice of policy titled "The Application of Irradiation to Phytosanitary Problems" in the **Federal Register** on May 15, 1996 (61 FR 24433–24439, Docket No. 95–088–1). In the section of that notice dealing with research protocols for determining appropriate doses and conditions for quarantine treatment, we stated that "In some instances, efficacy [of a minimum absorbed dosage] may be inferred from the literature for related species and commodities when complete laboratory investigations are not possible."

As we discussed in the interim rule, immediate action to allow the use of irradiation as an alternative treatment was warranted to alleviate the negative economic effects that Hawaiian growers and shippers faced as a result of our previous regulations, which identified fumigation as the only 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 the desired phytosanitary security was available to these producers, the requirement that sweetpotatoes must be fumigated to be moved interstate imposed an unnecessary economic hardship on these producers. Because we needed to take immediate action, we were not able to complete pest-specific research; therefore, in accordance with our notice of policy, we reviewed the available literature on related species and commodities to determine what dose would be effective at neutralizing the pests of concern.

The estimated minimum absorbed doses for certain responses for selected pest groups found in Appendix I of the IPPC guidelines were based on literature reviews by G.J. Hallman and the International Atomic Energy Agency's International Database on Insect Disinfestation and Sterilization (IDIDAS).¹ As discussed above, specific research has not been completed to determine the dose necessary to completely neutralize the ginger weevil, the sweetpotato scarabee, and the sweetpotato stem borer. However, the IDIDAS does cite a study indicating that a dose of 100 Gy (10 krad) is sufficient to induce 90 percent sterility in the sweetpotato scarabee.

The sweetpotato scarabee and the ginger weevil are stored product beetles classified under the order Coleoptera; the sweetpotato stem borer is a borer classified under the order Lepidoptera. The IDIDAS and the literature review by Hallman include references to studies of other pests of the order Coleoptera and other pests of the order Lepidoptera; the IPPC estimated minimum absorbed doses were derived from a general assessment of these references. The IPPC guidelines recommend a minimum absorbed dose of 50 to 400 Gy (5 to 40 krad) to sterilize actively reproducing adults of pests of the order Coleoptera and a minimum absorbed dose of 100 to

280 Gy (10 to 28 krad) to sterilize actively reproducing adults of pests of the order Lepidoptera. The dose of 400 Gy (40 krad) required by the interim rule is well above the IPPC guidelines' minimum dose range for borers of the order Lepidoptera and at the top of the minimum dose range for stored product beetles of the order Coleoptera. In our literature review, we determined that the ginger weevil, the sweetpotato scarabee, and the sweetpotato stem borer are biologically similar enough to other members of their respective orders, most of which are neutralized at doses well below 400 Gy (40 krad), that we believe that the 400 Gy (40 krad) dose required by the interim rule is a conservative minimum requirement that will be effective at neutralizing those three pests.

In addition, as we stated in the interim rule, 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 250 to 300 Gy (25 to 30 krad) is sufficient to stop reproduction in these pests. (In the preamble of the interim rule, we incorrectly stated that the preliminary research mentioned here had found that a dose of 200 Gy [20 krad] was sufficient to stop reproduction in these pests; one commenter supplied us with the revised figure, and we have used it here.) Given this information, we continue to believe that the minimum dose of 400 Gy (40 krad) required by the interim rule is a conservative minimum requirement that will neutralize all three of the pests targeted by the treatment. We are making no changes in response to these comments.

One commenter noted that the preamble of the interim rule stated that requiring visual inspection for the gray pineapple mealybug and the Kona coffee root-knot nematode as a condition of the interstate movement of sweetpotato from Hawaii "is consistent with the recommendations of the pest risk assessment." The commenter also noted that the PRA states at one point that "Port of entry inspections appear insufficient to safeguard U.S. agriculture." The commenter believed that these statements were inconsistent.

The statement "Port of entry inspections appear insufficient to safeguard U.S. agriculture" can be found in the executive summary of the PRA; it refers to the overall pest risk presented by the interstate movement of sweetpotatoes from Hawaii before

¹ Available at <http://www-ididas.iaea.org>.

mitigations are applied and is not a characterization of any of the mitigation measures recommended in the PRA for any specific pests. The PRA found that the gray pineapple mealybug and the Kona coffee root-knot nematode have pest risk potential values of "medium" and "low," respectively. Pests with pest risk potential values of "low" typically do not require specific mitigation measures, while specific phytosanitary measures may be necessary for pests with values of "medium." Because the two pests in question are external pests, we believe they can be visually detected by inspectors. We are making no changes in response to this comment.

One commenter questioned the reliability of visual inspection for detecting whether the gray pineapple mealybug and the Kona coffee root-knot nematode are present on sweetpotatoes moved interstate from Hawaii.

We are confident that all inspectors have the training and skills necessary to visually detect these pests.

One commenter asked what safeguards were in place to prevent the escape of pests from Hawaiian sweetpotatoes moved interstate if the sweetpotatoes were moved to a facility within the continental United States for irradiation treatment.

The interim rule requires that sweetpotatoes moved interstate from Hawaii to a facility within the continental United States for irradiation treatment must be moved under limited permit. Any shipping containers of sweetpotatoes moved interstate from Hawaii to a facility within the continental United States for treatment must also be sealed. In addition, the sweetpotatoes must be visually inspected and found to be free of gray pineapple mealybug and the Kona coffee root-knot nematode before they are moved interstate from Hawaii for treatment. We believe these safeguards are adequate to prevent the escape of any pests that may be present prior to the irradiation of the sweetpotatoes. We are making no changes in response to this comment.

Economic Analysis

One commenter questioned the economic viability of Hawaiian sweetpotato production in the context of the interim rule. The commenter noted that the economic analysis in the interim rule gave the farm price of Hawaiian sweetpotatoes as 50 cents per cwt² for 2001, as reported by the Hawaiian Agricultural Statistical

Service, while the farm price of sweetpotatoes in the mainland United States averaged 17 cents per cwt in 2002. In addition, production per acre of Hawaiian sweetpotatoes was far less than sweetpotato production per acre in mainland States. Given the additional costs of treatment and transportation from Hawaii to the mainland United States, the commenter asked how Hawaiian sweetpotato growers could expect to make a profit by moving their crop interstate. This question, in the commenter's view, cast doubt on the wisdom of allowing irradiation to be used as an alternative to fumigation with methyl bromide as a treatment for sweetpotatoes moved interstate from Hawaii, as the use of irradiation as an alternate treatment increased the risk of pest introduction via sweetpotatoes moved interstate from Hawaii and would not benefit Hawaiian producers of sweetpotatoes, since they would be unable to compete with mainland producers.

The sweetpotatoes grown in Hawaii and intended for interstate movement are a special purple variety, known as the Okinawan sweetpotato. Because the sweetpotatoes produced in Hawaii are a specialty product, the prevailing price for the crops of Hawaiian sweetpotato growers may be different than that of the crops of mainland sweetpotato producers. We have clarified this point in the economic analysis in this affirmation of the interim rule. However, this information does not affect our conclusion that irradiation is an effective alternative treatment to fumigation with methyl bromide for sweetpotatoes moved interstate from Hawaii.

Two commenters expressed concern that allowing irradiation as an alternative to fumigation with methyl bromide for treatment of sweetpotatoes moving interstate from Hawaii might result in significant economic effects for producers of sweetpotatoes in the mainland United States. One stated that the opening of the market for sweetpotatoes in the mainland United States for sweetpotatoes from Hawaii would probably result in increased production in Hawaii, and that the increased production would compete directly with the sweetpotatoes produced in the mainland United States; thus, even though current production of Hawaiian sweetpotatoes would not have a significant impact on a substantial number of small entities, the commenter asserted that such an impact was possible in the future. The other commenter, in reference to our statement that "even if the irradiation treatment leads to increased production

of sweetpotatoes, sweetpotato shipments from Hawaii are unlikely to affect mainland producers negatively," asked how we had determined this, and further asked why we had not determined the elasticity of demand for sweetpotatoes before issuing the interim rule. The commenter also asserted that any amount of additional competition in the mainland market for sweetpotatoes is likely to have significant negative economic effects on mainland sweetpotato growers.

In the economic analysis in the interim rule, we stated that any increases in the volume of sweetpotatoes moved interstate from Hawaii due to the addition of irradiation as an alternative treatment would not significantly affect mainland sweetpotato producers because Hawaiian sweetpotato production is extremely small compared to total U.S. sweetpotato production. Hawaiian sweetpotato production in 2001, the last year for which State data are available, was 1.8 million pounds; total U.S. sweetpotato production in 2003 is estimated by the U.S. Department of Agriculture's Economic Research Service (ERS) to be 1.36 billion pounds. Producers have started new plantings of Hawaiian sweetpotatoes since the interim rule became effective and the irradiation treatment became available; however, even with these plantings, Hawaiian sweetpotato production will still be extremely small as a percentage of total U.S. sweetpotato production. In addition, as noted above, Hawaiian sweetpotatoes are intended for niche markets due to their special purple color. Thus, as long as sweetpotatoes moved interstate from Hawaii are treated in accordance with the regulations, there is no apparent reason for APHIS to expect these shipments to affect mainland producers negatively. Based on this evidence, we believe an extensive analysis of U.S. demand for sweetpotatoes is unnecessary.

Regarding the comment that the interim rule opened the mainland U.S. sweetpotato market to Hawaiian sweetpotatoes, we would like to emphasize that Hawaiian sweetpotatoes had previously been allowed to move interstate after fumigation with methyl bromide. The interim rule simply provided that irradiation could be used as an alternative to fumigation.

In the economic analysis in the interim rule, we cited statistics indicating that domestic sweetpotato production grew 15 percent between 1989–1991 and 1999–2001. Two commenters stated that this statistic could be misleading. One pointed out that per capita potato consumption has

² "cwt" is an abbreviation for "hundredweight," a commonly used unit of production for sweetpotatoes. One hundredweight equals 100 pounds.

remained flat since 1989–1991 at 4.1 pounds per person, according to ERS. The other asserted that sweetpotato production has become essentially cyclical in the last 30 years, as rising prices lead to increased production, which leads to falling prices, which lead in turn to less production.

The statistics we cited in the interim rule referred to production, and not to consumption; they were cited to provide background on U.S. sweetpotato production. We stated in the economic analysis in the interim rule that sweetpotato production had peaked in 1932 and then demonstrated a long-term downward trend. However, analysis of the time series data shows that—though the long-term trend has been declining, and production fluctuated from year to year—an increasing trend in sweetpotato production has prevailed since 1989.

Responding to the statement in the interim rule's economic analysis that the total volume of sweetpotatoes moved interstate from Hawaii was not likely to exceed 100 containers due to production limitations, one commenter asked us to express that amount in pounds.

A typical shipping container used to transport Hawaiian sweetpotatoes can hold about 24,000 pounds of sweetpotatoes, so the total volume of sweetpotatoes moved interstate from Hawaii each year would not be likely to exceed 2.4 million pounds, even if Hawaii were to produce its maximum possible volume of sweetpotatoes. As noted earlier, current yearly Hawaiian sweetpotato production is 1.8 million pounds.

Approximately 30,000 to 40,000 pounds of sweetpotatoes are now moved interstate from Hawaii to the mainland United States per week, although these shipments have occurred during the low season and industry representatives expect their volume to increase. We have added this information to the economic analysis in this affirmation of the interim rule.

One commenter asked several questions about the capacity of the irradiation facility currently operating in Hawaii to treat sweetpotatoes to be moved interstate from Hawaii.

Because this capacity will vary according to the number of individual shipments treated in the facility and the number of pallets of sweetpotatoes per shipment, we cannot provide a definite answer. Extensive data on the volume of sweetpotatoes treated at the Hawaiian facility are not yet available to us and will only be generated as the operation of the facility continues.

Regarding the two points discussed above, one commenter was confused as to whether the limitations on Hawaii's production capacity relate to the fact that if the capacity of the irradiation facility currently operating in Hawaii is not enough to treat all the sweetpotatoes producers and shippers wish to move interstate, sweetpotatoes may be shipped to mainland irradiation facilities for treatment.

These two capacities are independent. If sweetpotatoes cannot be irradiated at the irradiation facility currently operating in Hawaii, they must be irradiated on the mainland or fumigated with methyl bromide in order to be eligible to move interstate.

One commenter asked whether production of Hawaiian sweetpotatoes is seasonal.

Hawaiian sweetpotatoes are produced and moved interstate throughout the year, but there is some seasonal variation in volume, according to industry representatives; production during the high season can be about three times the production during the low season. We have added this information to the economic analysis in this affirmation of the interim rule.

One commenter noted that, under some circumstances, fumigation with methyl bromide could be less expensive than irradiation treatment for sweetpotatoes moved interstate from Hawaii. The commenter asked how we could know that Hawaiian sweetpotato producers and shippers would use irradiation treatment and what percentage of the Hawaiian sweetpotato crop we would expect to be irradiated.

The interim rule provided Hawaiian sweetpotato producers and shippers with an additional option for treating their product prior to moving it interstate; these producers and shippers are free to choose the alternative they prefer. As stated in the economic analysis, the fumigation of larger volumes of sweetpotatoes may, at some volumes, be performed at a lower per-unit cost than irradiation. However, irradiation can be performed at a more convenient location for some producers and eliminates the costs associated with transport between islands and overtime costs for APHIS monitoring of the fumigation process. It is also possible that the economic attractiveness of the irradiation option might increase in the future, since the supply of methyl bromide will diminish in the future due to the requirements of the Montreal Protocol, and the cost of fumigation is expected to increase accordingly. As discussed above, however, extensive data on the volume of sweetpotatoes treated at the Hawaiian facility are not

yet available to us and will only be generated as the operation of the facility continues.

One commenter asked why Hawaii could not simply consume its own sweetpotato production, rather than moving sweetpotatoes interstate to the mainland United States.

APHIS has no authority over the movement of goods in interstate commerce except when such movement poses a plant or animal health risk. Hawaiian sweetpotato producers and shippers wish to move their sweetpotatoes interstate, and the interim rule provided an alternate treatment that gave those producers and shippers more options for interstate movement.

For one commenter, the interim rule appeared to be a deliberate attempt to benefit Hawaiian sweetpotato growers at the expense of mainland sweetpotato growers. The commenter cited in particular the statement in the economic analysis of the interim rule that providing the alternative irradiation treatment "may lead to increased production of sweetpotatoes in Hawaii if the lower cost of treatment makes sweetpotato a more profitable crop to produce and ship." The commenter took from this statement an implication that Hawaiian sweetpotato was already profitable and that APHIS was seeking to make it more profitable, and was concerned that a rule designed to make one production area more profitable than others within the United States would be unfair.

APHIS establishes regulations to address animal and plant health risks. Of all the States, only sweetpotatoes grown in Hawaii, Puerto Rico, and the U.S. Virgin Islands are required to be treated prior to interstate movement. Allowing irradiation to be used as an alternative to methyl bromide for treatment of sweetpotatoes moved interstate from Hawaii was not intended to favor producers in Hawaii over producers in other States, but rather to provide Hawaiian producers with another means of complying with the interstate movement restrictions they face.

One commenter asked whether the economic benefits gained by the irradiation treatment facility currently operating in Hawaii were our motivation for allowing irradiation to be used to treat sweetpotatoes moving interstate from Hawaii.

We stated our motivation for allowing irradiation as an alternate treatment in the interim rule under the heading "Immediate Action." Immediate action was warranted to alleviate the negative economic effects that Hawaiian growers and shippers faced as a result of our

previous regulations, which required fumigation as the only 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 the desired phytosanitary security was available to these producers, the requirement that sweetpotatoes must be fumigated to be moved interstate imposed an unnecessary economic hardship on these producers. The interim rule made irradiation treatment available to those producers.

One commenter supplied us with more current data on the operations of the irradiation treatment facility currently operating in Hawaii:

- We stated in the interim rule's economic analysis that the irradiation facility is used to treat bell peppers, eggplants, mangoes, papayas, pineapples (other than smooth Cayenne), Italian squash, and tomatoes. Although the regulations allow irradiation to be used as a treatment for bell peppers, eggplants, pineapples, Italian squash, and tomatoes to be moved interstate from Hawaii, the irradiation facility is currently not being used to treat these commodities. However, the facility is treating atemoya, carambola, litchi, longan, and rambutan.

- We also stated in the interim rule's economic analysis that some Hawaiian fruits and vegetables are sometimes shipped to irradiation facilities in the mainland United States for treatment. The commenter stated that all the produce for which irradiation is an approved treatment is currently treated in Hawaii before it is moved interstate. We have updated the economic analysis accordingly.

Therefore, for the reasons given in the interim rule and in this document, we are adopting the interim rule as a final rule without change.

This action also affirms the information contained in the interim rule concerning Executive Orders 12866, 12372, and 12988 and the Paperwork Reduction Act.

Further, for this action, the Office of Management and Budget has waived its review under Executive Order 12866.

Regulatory Flexibility Act

This rule affirms an interim rule that amended the regulations to provide for the use of irradiation as a treatment for sweetpotatoes to be moved interstate

from Hawaii. The interim rule also provided that the sweetpotatoes have to meet certain additional requirements, including inspection and packaging requirements. The interim rule provided for the use of irradiation as an alternative to methyl bromide for the treatment of sweetpotatoes moving interstate from Hawaii.

The following analysis addresses the economic effect of this rule on small entities, as required by the Regulatory Flexibility Act.

Economic Importance of Sweetpotatoes in Hawaii and the Mainland United States

Commercial sweetpotato production in Hawaii occurs on the islands of Hawaii, Kauai, Maui, and Oahu. There were 53 sweetpotato farms in Hawaii in 1997.³ In 2001, the production of sweetpotatoes in Hawaii amounted to 1.8 million pounds, and the value of sales of these sweetpotatoes was \$900,000 (table 1). The sweetpotatoes intended for interstate movement are of a special purple flesh variety known as the Okinawan sweetpotato. The crop is in year-round production in Hawaii.

TABLE 1.—PRODUCTION STATISTICS FOR HAWAIIAN SWEETPOTATOES (2001)

Item	Amount
Harvested acres	220
Yield per acre (1,000 pounds)	8.2
Production (1,000 pounds)	1,800
Farm price (cents per pound)	50
Value of sales (1,000 dollars)	900

Source: Hawaii Agricultural Statistics Service.

In the continental United States, sweetpotato is grown commercially in Alabama, California, Georgia, Louisiana, Mississippi, New Jersey, North Carolina, South Carolina, Texas, and Virginia.⁴ North Carolina, Louisiana, Mississippi, and California account for the major proportion of production area by State (table 2). In total, the United States produced 1.36 billion pounds of sweetpotatoes from 93,500 acres in 2003 (table 3).

TABLE 2.—ACRES OF SWEETPOTATOES PLANTED IN THE UNITED STATES (2003)

State	Acres planted
North Carolina	42,000

³ Census of Agriculture, 1997, National Agricultural Statistics Service (NASS).

⁴ NASS, 1999.

TABLE 2.—ACRES OF SWEETPOTATOES PLANTED IN THE UNITED STATES (2003)—Continued

State	Acres planted
Louisiana	18,000
Mississippi	14,000
California	10,100
Texas	3,400
Alabama	2,900
Others ¹	3,100
Total	93,500

¹ Including Hawaii.

Source: Economic Research Service, USDA.

The crop is grown on 1,770 farms, which represents a decrease of 44 percent since 1987.⁵ Production of sweetpotatoes peaked in 1932 when 48 million cwt was generated, followed by a long-term downward trend in production. However, sweetpotato production trended higher again after 1988, and increased by 15 percent between 1989–1991 and 1999–2001. Farm cash receipts averaged \$214 million over the period 1999–2001. Few imports of sweetpotatoes enter the continental United States, with 97 percent of the import volume moving directly from the Dominican Republic into Puerto Rico. The Hawaiian sweetpotato production of 1.8 million pounds thus comprises a fairly minor proportion of the total production of 1.36 billion pounds in the United States.

TABLE 3.—PRODUCTION AND UTILIZATION STATISTICS FOR SWEETPOTATOES IN THE UNITED STATES (2003) ¹

Item	Amount
Acres planted	93,500
Three year average yield (cwt/acre)	150
Production (million pounds)	1,355
Imports (million pounds)	17.0
Exports (million pounds)	53.0
Total utilization (million pounds) ²	1,148.3
Per capita use (pounds)	3.9
Three year average per capita use (pounds)	4.0
Current dollars (\$/cwt)	15.75
Constant 1996 dollars (\$/cwt)	13.91

¹ Estimates are for the total United States, and therefore include Hawaii. Forecasted estimates are shown.

² Total utilization includes 103 million pounds used for seed and 67.8 million pounds accruing to feed use, shrink, and loss.

⁵ Lucier, G. "Sweet potatoes—getting to the root of demand." Economic Research Service, USDA, 2002.

Source: Economic Research Service, United States Department of Agriculture. Acres were obtained from Lucier.⁶

More than three-quarters of the annual U.S. sweetpotato crop is sold as human food, and around two-thirds of the total sales are for the fresh market. About a quarter of the sweetpotatoes sold for food are processed into frozen products, and 2 to 3 percent are chipped or dehydrated. U.S. sweetpotato utilization averaged 1.1 billion pounds during 1999–2001, accounting for almost 3.9 pounds per capita.

Treatment Costs

Costs of Methyl Bromide Fumigation

Methyl bromide fumigation is currently conducted on the Island of Oahu. The product has to be moved by barge from the port of Hilo on the Island of Hawaii to the port of Honolulu on Oahu. The charge for such transportation is between 2 to 3 cents per pound. A pallet of sweetpotatoes weighs 1,500 pounds (50 30-pound boxes), so the charge is approximately \$35 per pallet for a non-chilled shipment. Trucking and handling charges to move the sweetpotatoes from the pier on Oahu to the fumigation site and, after fumigation, back to the pier or to the airport are estimated at \$34 per pallet.

The per-unit cost of methyl bromide fumigation is influenced by the number of pallets treated. Costs are \$610 for 1 to 6 pallets, \$1,026 for 7 to 9, and \$1,250 for 10 to 12. The minimum charge is \$610. Per-unit cost thus decreases as more pallets are treated within these ranges. For example, the cost decreases from 40.6 cents per pound to 6.7 cents per pound if six pallets instead of only one pallet are treated at \$610 (table 4).

TABLE 4.—COSTS OF METHYL BROMIDE FUMIGATION OF HAWAIIAN SWEETPOTATOES

Number of pallets	Weight (pounds)	Cost (cents per pound)
One	1,500	40.6
Two	3,000	20.3
Three	4,500	13.5
Four	6,000	10.1
Five	7,500	8.1
Six	9,000	6.7
Nine	13,500	7.6
Twelve	18,000	6.9

Source: Hawaii Department of Agriculture.

APHIS monitoring of the treatment costs \$368 per treatment. This is based on a minimum of 2 hours required to set up for the fumigation, a minimum of 2

hours for necessary after-treatment labor such as certification, and 2 hours minimum travel time each way to monitor the fumigation. The total 8 hours at \$46 per hour amounts to \$368. Due to the time delays involved in inter-island movements of sweetpotatoes, all fumigations are conducted after 4 p.m. or on weekends, which means that APHIS treatment monitors are paid “time-and-a-half” wages. If the sweetpotatoes being treated belong to more than one shipper, the APHIS costs are evenly divided between the shippers, regardless of the relative quantities treated for each shipper. For example, if two shippers are involved, each would pay \$184, even if one shipper’s sweetpotatoes comprised more than half of the total treated. APHIS monitoring costs for fumigation do not vary with the number of sweetpotatoes treated.

Various time delays are involved in the inter-island movement of the sweetpotatoes for fumigation, meaning that this transportation is sometimes problematic. Shipments from the main island, Hawaii, generally leave Hilo on Monday, with the barge arriving at Oahu on Wednesday. These shipments are treated on Wednesday or Thursday and arrive by Friday on the mainland U.S. west coast if transported by air. The barge that leaves Hilo on Thursday arrives at Oahu on Saturday. Weekend fumigation is conducted at significantly higher costs and Sunday pickup at the pier is not allowed. Thus, shipping sweetpotatoes on the Thursday barge is generally avoided.⁷

There are also concerns regarding the future cost and availability of methyl bromide given the continuing reductions in the use of methyl bromide mandated by the Montreal Protocol, which governs the use of substances that deplete stratospheric ozone; in 2005, all uses of methyl bromide in developed countries other than quarantine and pre-shipment applications and critical or emergency uses will be prohibited. The price of methyl bromide has increased significantly as worldwide production of methyl bromide has decreased from its 1991 baseline. According to the U.S. Environmental Protection Agency, U.S. west coast end-user prices of methyl bromide have increased from \$1.25 per pound to \$4.50 per pound over the period 1995 to 2001. This represents an increase of 366 percent. Further price increases are deemed likely as the 2005 phase-out date approaches.

Costs of Irradiation

The cost of irradiation is estimated at 15 cents per pound.⁸ Lot sizes will be as requested by shippers. Irradiation treatment generally occurs between 8 a.m. and 4 p.m. At these times, an APHIS inspector would already be onsite at the irradiation facility to monitor the treatment under the terms of the compliance agreement irradiation facilities must operate under in order to treat fruits and vegetables from Hawaii for interstate movement. Therefore, there would generally be no additional APHIS charges associated with irradiation treatment. Shippers could choose to have their sweetpotatoes treated outside of normal hours and thus incur APHIS charges for overtime labor, but such scheduling would be optional; as noted above, all fumigation treatments currently must be conducted during overtime hours.

The irradiation will occur mostly at an existing facility in Hawaii, prior to the shipment of the sweetpotatoes to the mainland United States. The X-ray irradiation facility in Hawaii commenced its commercial operation on August 1, 2000. At first, only papayas were treated. Five hundred to 1,000 boxes of papayas are treated per day, 4 times a week. The facility is currently also used to treat other Hawaiian fruits and vegetables for which irradiation is an approved treatment. At present, all of the fruits and vegetables produced in Hawaii for which irradiation is an approved treatment are irradiated in Hawaii before they are moved interstate.

The Hawaiian sweetpotatoes intended for the U.S. mainland markets are of a special purple flesh variety. The crop therefore comprises a specialty product intended for niche markets. The sweetpotatoes are in year-round production in Hawaii, but some seasonal variation in volume is expected. Out-shipment of the sweetpotatoes has been estimated at 50,000 to 60,000 pounds per week, and an estimated 30,000 to 40,000 pounds per week has been shipped since the interim rule was published. However, these weekly shipments occurred during the low season, and industry representatives expect the shipments to increase. New plantings of the crop have also commenced since the irradiation treatment became available.

Benefits of Irradiation Treatment

The approval of irradiation as an alternative treatment for sweetpotatoes moved interstate from Hawaii will

⁶ Lucier, G., *ibid.*

⁷ Source: Hawaii Department of Agriculture.

⁸ Source: Hawaii Department of Agriculture.

benefit various stakeholders. At 15 cents per pound, irradiation can be conducted at a lower cost than fumigation of one to two pallets (20.3 to 40.6 cents per pound) (table 4). Though larger quantities of sweetpotatoes, which fill more pallets, can be fumigated at lower per-unit costs (6.7 to 13.5 cents per pound), irradiation eliminates the transport costs associated with fumigation for producers on the island of Hawaii. These transport costs include moving the crop from the island of Hawaii to Oahu (2 to 3 cents per pound) and trucking and handling costs of moving the crop between the harbor or airport and the fumigation site on Oahu (\$34 per pallet, about 2.3 cents per pound). Irradiation also eliminates the cost of \$368 per treatment attributable to APHIS monitoring of fumigation, which is currently conducted outside standard business hours, for all producers.

Growers and shippers on the main island of Hawaii will benefit from lower transportation costs, since shipment of the crop from Hawaii to Oahu for fumigation will no longer be necessary. The availability of treatment at a more convenient location will also remove various logistical complications. This will reduce the total expense and time delay in moving the product and will enable sweetpotatoes to be treated and shipped at a lower cost than is currently possible with fumigation. The importance of alternative treatments is especially highlighted in view of the mandated global reductions in the use of methyl bromide under the Montreal Protocol. Irradiation also tends to affect quality less negatively than fumigation and may extend the shelf life of the tubers.

The irradiation facility in Hawaii will benefit from having more crops available to treat. The treatment available at this facility has enabled many producers in Hawaii to move their products to the mainland, thus providing them with access to markets that were not previously available. For several years, the State of Hawaii has encouraged farmers to diversify agricultural production, given the significant decline in the production of sugarcane as a major crop. The approval of irradiation as a treatment for sweetpotatoes moved interstate from Hawaii will help to provide steady throughput for this facility. The facility currently treats seasonal crops whose volume is more variable than that of sweetpotatoes and is thus sometimes underutilized. A steady source of revenues from treatment, such as revenues from treating sweetpotatoes to be moved interstate, would help assure this facility's continued operation and

availability for all the producers in Hawaii who can use it.

U.S. mainland consumers will benefit by an increased supply of sweetpotatoes, and particularly the increased availability of the specialty purple sweetpotatoes Hawaii produces. Hawaiian sweetpotato production amounts to 1.8 million pounds, which comprises a small proportion of the total production of 1.36 billion pounds in the United States (tables 1, 2 and 3).

Thus, as long as phytosanitary protection is maintained by treating sweetpotatoes from Hawaii prior to interstate movement, sweetpotato shipments from Hawaii are unlikely to affect mainland producers negatively, even if the availability of the irradiation treatment leads to further increases in the production of Hawaiian sweetpotatoes. Furthermore, the purple sweetpotatoes Hawaii produces are intended for niche markets in the mainland United States. However, to the extent that this interim rule makes moving sweetpotatoes from Hawaii interstate more convenient and less costly, the rule provides the Hawaiian sweetpotato industry with opportunities to expand the mainland markets for its specialty product.

Impact on Small Entities

The Regulatory Flexibility Act requires that agencies specifically consider the economic impact of their regulations on small entities. The Small Business Administration (SBA) has established size criteria using the North American Industry Classification System (NAICS) to determine which economic entities meet the definition of a small firm.

The irradiation facility in Hawaii is expected to be the primary facility to treat Hawaiian sweetpotatoes before they are moved interstate. However, the sweetpotatoes may also be sent to one of the three other facilities on the mainland United States. These include facilities in Libertyville and Morton Grove in Illinois, and a facility in Whippany, New Jersey. The facility in Hawaii can be classified under NAICS category 115114, "Postharvest Crop Activities (except Cotton Ginning)." According to the SBA's criteria, this facility is classified as a small entity, since its annual sales are less than \$6 million. A single firm owns the two facilities in Illinois and the facility in New Jersey. Its primary service is to provide irradiation treatment for the sanitation of medical devices on contract. This firm is classified under NAICS category 325612, "Polish and Other Sanitation Good Manufacturing." However, since it is part of a larger

corporation with 500 or more employees, that firm is not considered a small entity under the SBA's criteria.

Sweet potato farming is classified under NAICS 111219, "Other Vegetables (except Potato) and Melon Farming." According to the SBA's criteria, an entity involved in crop production is considered small if it has average annual receipts of less than \$750,000. Since the 53 sweetpotato farms in Hawaii accounted for sales of \$900,000 in 2001, we believe it is safe to assume that all of these farms would be classified as small entities. We expect that the economic effects of this rule will be positive for those producers, to the extent that this rule makes moving sweetpotatoes from Hawaii interstate more convenient and less costly.

As discussed above, new sweetpotato plantings in Hawaii have commenced since the interim rule became effective. Nevertheless, even if sweetpotato production increases in Hawaii, the relative volume of production (1.8 million pounds) remains minimal in comparison to the volume of U.S. mainland production (1.36 billion pounds). The purple-fleshed Hawaiian sweetpotatoes furthermore are a specialty product intended for niche markets. Thus, as long as phytosanitary protection is maintained by treating sweetpotatoes from Hawaii prior to interstate movement, sweetpotato shipments from Hawaii are unlikely to affect mainland producers negatively.

Under these circumstances, the Administrator of the Animal and Plant Health Inspection Service has determined that this action will not have a significant economic impact on a substantial number of small entities.

List of Subjects in 7 CFR Part 318

Cotton, Cottonseeds, Fruits, Guam, Hawaii, Plant diseases and pests, Puerto Rico, Quarantine, Transportation, Vegetables, Virgin Islands.

PART 318—HAWAIIAN AND TERRITORIAL QUARANTINE NOTICES

■ Accordingly, we are adopting as a final rule, without change, the interim rule that amended 7 CFR part 318 and that was published at 68 FR 37931–37936 on June 26, 2003.

Authority: 7 U.S.C. 7701–7772; 7 CFR 2.22, 2.80, and 371.3.

Done in Washington, DC, this 11th day of February, 2004.

Kevin Shea,

Acting Administrator, Animal and Plant Health Inspection Service.

[FR Doc. 04–3428 Filed 2–17–04; 8:45 am]

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