DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

7 CFR Part 319

[Docket No. 00–003–2]

RIN 0579–AB27

Mexican Hass Avocado Import Program

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Proposed rule.

SUMMARY: We are proposing to amend the regulations governing the importation of fruits and vegetables to expand the number of States in which fresh avocado fruit grown in approved orchards in approved municipalities in Michoacan, Mexico, may be distributed. We are also proposing to increase the length of the shipping season during which the Mexican Hass avocados may be imported into the United States. We are proposing this action in response to a request from the Government of Mexico and after determining that expanding the current Mexican avocado import program would present a negligible risk of introducing plant pests into the United States.

DATES: We invite you to comment on this docket. We will consider all comments that we receive by September 11, 2001. We will also consider comments made at public hearings in Escondido, CA; Austin, TX; Denver, CO; and Homestead, FL. The exact dates and times for the hearings and the specific locations of all four hearings will be announced in a notice to be published in a future issue of the **Federal Register**.

ADDRESSES: Please send four copies of your comment (an original and three copies) to: Docket No. 00–003–2, Regulatory Analysis and Development, PPD, APHIS, Suite 3C03, 4700 River Road, Unit 118, Riverdale, MD 20737–1238. Please state that your comment refers to Docket No. 00–003–2.

You may read any comments that we receive on this docket in our reading room. The reading room is located in room 1141 of the USDA South Building, 14th Street and Independence Avenue SW., Washington, DC. Normal reading room hours are 8 a.m. to 4:30 p.m., Monday through Friday, except holidays. To be sure someone is there to help you, please call (202) 690–2817 before coming.

APHIS documents published in the **Federal Register**, and related information, including the names of organizations and individuals who have commented on APHIS dockets, are available on the Internet at http://www.aphis.usda.gov/ppd/rad/webrepor.html.

Public hearings regarding this proposed rule will be held at the following locations: (1) Escondido, CA; (2) Austin, TX; (3) Denver, CO; and (4) Homestead, FL.

FOR FURTHER INFORMATION CONTACT: Mr. Wayne D. Burnett, Senior Import Specialist, Phytosanitary Issues Management Team, PPQ, APHIS, 4700 River Road Unit 140, Riverdale, MD 20737–1236; (301) 734–6799.

SUPPLEMENTARY INFORMATION:

Public Hearings

Hearings on this proposed rule will be held in Escondido, CA; Austin, TX; Denver, CO; and Homestead, FL. The exact dates and times for the hearings and the specific locations of all four hearings will be announced in a notice published in a future issue of the **Federal Register**.

Background

The regulations in ''Subpart—Fruits and Vegetables'' (7 CFR 319.56 through 319.56–8) prohibit or restrict the importation of fruits and vegetables into the United States from certain parts of the world to prevent the introduction and dissemination of plant pests, including fruit flies, that are new to or not widely distributed within the United States.

Under the regulations in 7 CFR 319.56–2ff (referred to below as the regulations), fresh Hass avocado fruit grown in approved orchards in approved municipalities in Michoacan, Mexico, may be imported into specified areas of the United States, subject to certain conditions. Those conditions, which include pest surveys and pest risk-reducing cultural practices, packinghouse procedures, inspection and shipping procedures, and restrictions on the time of year (November through February) that shipments may enter the United States, are designed to reduce the risk of pest introduction to a negligible level. Further, the regulations limit the distribution of the avocados to 19 northeastern States (Connecticut, Delaware, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and Wisconsin) and the District of Colombia, where climatic conditions preclude the establishment in the United States of any of the exotic plant pests that may attack avocados in Michoacan, Mexico.

In January 2000, we amended the regulations to require handlers and distributors of Mexican Hass avocados to enter into compliance agreements with APHIS. We also added requirements regarding the repackaging of avocados after their entry into the United States. These amendments were necessary to ensure that distributors and handlers are familiar with the distribution restrictions and other requirements of the regulations and to ensure that any boxes used to repackage the avocados in the United States bear the same information that is required to be displayed on the original boxes in which the fruit was packed in Mexico.

In September 1999, the Government of Mexico requested that APHIS amend the regulations to (1) increase the number of States into which the avocados may be imported and (2) to allow the shipping season to begin 1 month earlier (October rather than November) and end 1 month later (March rather than February).

On May 11, 2000, we published a notice in the **Federal Register** (65 FR 30365–30366, Docket No. 00–003–1) in which we solicited comments on Mexico's request. In particular, we asked the public for comments and recommendations regarding the scope of our review of Mexico's request and requested interested persons to submit any data or information that may have a bearing on our review of the Mexican Government's request. We requested that comments focus on scientific, technical, or other issues that commenters believed should be considered during our review of the Mexican Government's request.

We solicited comments on our request for 90 days, ending August 9, 2000. By that date, we received 265 comments. The comments were submitted by avocado growers, processors, packers and importers, grocers, Members of Congress, Mexican Government officials, researchers, and State and local departments of agriculture. In general, the majority of commenters supported expanding the area of distribution of Hass avocados and increasing by the length of the shipping season during which Hass avocados may be imported into the United States. Two commenters provided data that were considered in the development of a study titled ''Identification of Susceptible Areas for the Establishment of *Anastrepha* spp. Fruit Flies in the United States and Analysis of Selected Pathways'' (Sequeira, *et al.,* 2001). This study, along with several previous risk documents, provides the basis for this proposed rule. Several commenters had specific concerns about Mexico's

request and the current Hass avocado import program. These comments are discussed later in this document.

We have completed our review of the Mexican Government's request and have evaluated the information submitted by commenters in response to our request for comments. Based on our review of the public comments (discussed later in this document) and the findings of various risk analysis documents prepared by APHIS, which are discussed in detail below beginning with the section titled *Risk Assessment Documentation Supporting the Proposed Rule,* we are proposing to amend § 319.56–2ff(a)(2) of the regulations to extend by 2 months the shipping season during which Hass avocados from approved orchards in approved municipalities in Michoacan, Mexico, may be imported into approved areas of the United States. With this proposed change, the shipping season would run from November through April.

We are also proposing to expand the area to which the Mexican Hass avocados may be distributed by adding Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming to the list of approved States in § 319.56–2ff(a)(3). These 12 additional States, like the currently approved States, do not contain host material for any of the avocado-specific pests of concern and have phenological conditions that do not support the establishment of fruit flies, especially during the proposed shipping season.

Note: Since the publication of the May 2000 request for comments on this subject, the Government of Mexico has requested that APHIS amend the regulations to allow Hass avocados to be imported year round into all 50 States. We are not proposing to allow avocados to be imported year round to all U.S. States per Mexico's request because we do not currently have documentation available to support Mexico's position that such importations would not present a risk of introducing plant pests into certain States.

In addition to the proposed changes to § 319.56–2ff(a)(2) and (a)(3) discussed above, our proposed expansion of the shipping season and the number of States in which Mexican Hass avocados may be distributed would necessitate several other changes in the regulations. First, we would amend the limited distribution statement required by § 319.56–2ff(c)(3)(vii) to reflect the addition of the 12 new States. Specifically, the statement that must be placed on boxes used to ship imported Hass avocados from Mexico would be changed to read ''Distribution limited to the following States: CT, CO, DC, DE, ID, IL, IA, IN, KS, KY, ME, MD, MA, MI, MN, MO, MT, NE, NH, NJ, NY, ND, OH, PA, RI, SD, UT, VA, VT, WV, WI, and WY.''

Paragraphs (e)(2) and (e)(3) of § 319.56–2ff each refer to the ''entire shipping season of November through February.'' We are proposing to amend those paragraphs so that they refer to the shipping season as running from November through April.

We would also amend the existing regulations to allow the imported avocados to transit additional States. Currently, the regulations in § 319.56–2ff(g) do not allow avocados to be moved west of a line extending from El Paso, TX, to Denver, CO, and due north from Denver. Given that, under our proposal, avocados would be eligible for importation into several States west of this line, we are proposing to revise the description of the area through which Mexican Hass avocados may be moved by truck or rail car. Under our proposal, avocados would not be allowed to transit the area to the west of the following line: Following Interstate 10 north from El Paso, TX, to Las Cruces, NM, and then north following Interstate 25 to the Colorado border. Once in Colorado, trucks and rail cars carrying avocados would be free to move to any State located within the approved distribution area described in § 319.56–2ff(a)(3). The current eastern shipping boundary would not change.

Finally, we would amend several paragraphs in the regulations to remove references to ''northeastern States,'' as that geographic limitation would no longer apply.

Risk Assessment Documentation Supporting the Proposed Rule

The final rule that established the current Mexican Hass avocado import program was published in the **Federal Register** on February 5, 1997, and became effective on March 7, 1997 (62 FR 5293–5315, Docket No. 94–116–6). In the final rule, we stated, in response to a comment about expanding the approved avocado distribution area to include additional States, that new States could be added to the list of approved States in the future if APHIS received a request to do so and the Agency determined that avocados could be imported into other States without presenting a significant pest risk.

After considering the comments received in response to our May 2000 request for information and reviewing our existing data, we have determined that there is sufficient information to support the Mexican Government's request to expand the list of approved States and the avocado shipping season. The information on which this determination is based is primarily derived from the following documents:

- A risk management analysis, ''A Systems Approach for Mexican Avocado'' (USDA, May 1995), prepared for the July 1995 proposed rule.
- A supplemental pest risk assessment, ''Importation of Avocado Fruit (*Persea americana*) from Mexico'' (USDA, May 1995) and an addendum to it, ''Estimates for the Likelihood of Pest Outbreaks Based on the Draft Final Rule'' (USDA, July 1996).
- A document, ''Identification of Susceptible Areas for the Establishment of *Anastrepha* spp. Fruit Flies in the United States and Analysis of Selected Pathways'' (Sequeira, *et al.*, 2001), which was completed in 2001 as the U.S. portion of a project by a subcommittee of the Pest Risk Assessment Panel of the North American Plant Protection Organization (NAPPO).
- Four shipping seasons (1997–2001) worth of shipping and inspection data collected either by APHIS or jointly by APHIS and its Mexican counterpart, the Secretariat of Agriculture, Livestock and Rural Development, Fisheries and Food (SAGARPA).
- Two avocado program review reports, prepared in June 1999 and May 2001, which include evaluations of the program based on site visits to production areas in Mexico.
- Four years worth of fruit fly trapping data for the approved orchards in approved municipalities in Mexico.

The content of these documents, and our analysis of their applicability to this proposed rule, are summarized below. This summary is an excerpt from an APHIS document entitled ''Information Memo for the Record'' (April 30, 2001). Copies of all of the documents referenced above, including the information memo, are available by contacting the person listed under **FOR FURTHER INFORMATION CONTACT,** or via the Internet at http://www.aphis.usda.gov/ppq/avocados/.

1995 Risk Management Analysis

The risk management analysis describes the degree to which the various elements of the systems approach employed for the importation of Mexican Hass avocados are expected to mitigate the pest risk associated with such importations. The risk management analysis evaluates the following pests:

- Small avocado seed weevils (*Conotrachelus perseae* and *C. aguacatae*),

- Large avocado seed weevil (*Heilipus lauri*),
- Avocado stem weevil (*Copturus aguacatae*),
- Avocado seed moth (*Stenoma catenifer*),
- Fruit flies (*Anastrepha ludens, A. striata* and *A. serpentina*),[1] and
- Hitchhikers and miscellaneous other pests.

The risk mitigation elements of the systems approach evaluated in the document include the following measures:

- Field surveys,
- Trapping and field treatments,
- Field sanitation,
- Host resistance,
- Post harvest safeguards,
- Winter shipping only (November through February),
- Packinghouse inspection and fruit cutting,
- Port-of-arrival inspection, and
- Limited U.S. distribution (northeastern States only).

The risk management analysis concluded that the cumulative effects of the systems approach lower the risk of all target pests to an insignificant level and that even if one of the mitigation measures should completely fail, the risk reduction effect of the other measures would maintain risk at a low level. The risk management analysis further concluded that the risk from hitchhikers and other pests would be lower than the comparative risk posed by hundreds of other products that are imported into the United States with port-of-entry inspection as the primary clearance requirement.

1995 Supplemental Pest Risk Assessment and 1996 Addendum

The primary components of the supplemental pest risk assessment are:

- A listing of avocado pests known to occur in Mexico;
- A qualitative assessment of the consequences of introducing specific quarantine pests expected to follow the pathway of avocado fruit imported in accordance with the systems approach;
- Biological information on those quarantine pests;
- A scenario analysis considering the likelihood that infested fruit transported to suitable habitat would result in the establishment of those quarantine pests in the United States;
- Quantitative estimates of the likelihood that infested fruit transported to suitable habitat would result in the establishment of those quarantine pests in the United States; and
- Brief recommendations regarding measures to manage plant pest risk.

The document estimates the probability of pest establishment by comparing two scenarios for imported Mexican Hass avocados: (1) That there were no specific risk mitigation measures in place (i.e., the baseline scenario), and (2) that the mitigation measures described in the July 3, 1995, proposed rule were in place (the mitigated scenario).

The supplementary pest risk assessment identifies 91 pests of avocado in Mexico (26 pathogens and 65 arthropods). Of the 91 pests identified, 32 (2 pathogens and 30 arthropods) satisfy the geographic and regulatory criteria for designation as a quarantine pest. Of these 32 quarantine pests, only 9 arthropods are expected, based on their biology, to follow the pathway of imported Mexican Hass avocado fruit. Those nine arthropods (which were identified for consideration in the risk management analysis) are:

- *Anastrepha fraterculus*—fruit fly.
- *Anastrepha ludens*—fruit fly.
- *Anastrepha serpentina*—fruit fly.
- *Anastrepha striata*—fruit fly.
- *Conotrachelus aguacatae*—seed weevil.
- *Conotrachelus perseae*—seed weevil.
- *Heilipus lauri*—seed weevil.
- *Copturus aguacatae*—stem weevil.
- *Stenoma catenifer*—seed moth.

The nine pests are categorized for the purposes of the extended assessment as follows:

- Fruit flies: *Anastrepha fraterculus, A. ludens, A. serpentina*, and *A. striata*.
- Seed weevils: *Conotrachelus aguacatae, C. perseae, Heilipus lauri*.
- Stem weevil: *Copturus aguacatae*.
- Seed moth: *Stenoma catenifer*.

The supplemental pest risk assessment then rates pest groups qualitatively for their ''Pest Risk Potential'' (PRP). The ratings are based on a series of risk elements that are used to estimate the consequences of a pest's introduction. The PRP is considered to be a biological indicator of the potential destructiveness of the pest. The seed weevils, stem weevil, and seed moth have PRP values considered to be medium. The supplemental pest risk assessment's ratings are based on our findings that, although these pests could potentially have a significant economic impact on domestic avocado production, their host range is extremely narrow (the weevils are only known to attack avocado, and the seed moth attacks only avocado and one other plant species), they have a narrow climatic tolerance, and their dispersal potential is limited. The fruit flies' PRP is considered high. The difference in the ratings for the fruit flies as compared to the weevils and the seed moth can be attributed to the broader range of hosts attacked by the fruit flies, their greater motility, and higher potential economic impact.

The supplemental pest risk assessment estimates the likelihood that particular pests would be introduced into the United States as a result of importation of Mexican Hass avocado fruit. First, the events that would have to occur before pest outbreaks could occur were conceptualized using the method of scenario analysis. The results of the scenario analysis were then used to run a series of Monte Carlo simulations to estimate the frequency of pest outbreaks. The chosen endpoint for the simulations was the frequency of pest outbreaks. Two scenarios (i.e., program alternatives) were considered:

- Importation of Mexican avocado fruit with no specific measures to mitigate plant pest risks, and
- Importation of only Hass avocado fruit and only under the systems approach proposed in the July 3, 1995, proposed rule.

A single risk model was employed for both the unmitigated (baseline) scenario and the mitigated (program) scenario. It is a linear, multiplicative model comprised of seven ''nodes'' with the endpoint of frequency of outbreaks (establishment) per year based on an estimated number of shipments. It is assumed that all of the events (nodes) in the model are independent and all must occur before a pest establishment can take place. The risk model is as follows:

F1: Frequency of shipments (number of boxes imported per year) ×
P1: Probability pest infests fruit: pre-or postharvest ×
P2: Probability pest not detected during harvest or packing ×
P3: Probability pest survives shipment ×
P4: Probability pest not detected at port of entry inspection ×
P5: Probability fruit is transported to area with suitable hosts and climate ×
P6: Probability infested fruit in suitable habitat leads to outbreak =
F2: Frequency of pest outbreaks in the United States

Because the actual probabilities of the independent events comprising the risk model were not known, they were estimated. Although the probabilities were estimated, pertinent data were available for each independent event. The estimates were based to a large extent on expert judgment. A core team

[1] In Attachment 1 of the risk management analysis, APHIS discusses its consideration of *Anastrepha fraterculus* as a pest of avocados. *A. fraterculus* is not considered in the body of the risk management analysis because no research suggests the population of *A. fraterculus* found in Mexico is a pest of avocados.

of four entomologists estimated probabilities, and numerous technical specialists (e.g., scientists specializing in particular taxonomic groups, port inspectors, specialists in international trade, etc.) were consulted throughout the process. The estimates were specified as probability distribution functions that described a range of values between specified maximums and minimums. The frequency of pest outbreaks was calculated using Monte Carlo simulation.

The results of quantitative estimates of the ''Likelihood of Introduction'' section of the 1995 supplemental pest risk assessment are summarized in the following table:

TABLE 1.—PEST OUTBREAK FREQUENCY: MEXICAN AVOCADO PESTS, BY PROGRAM ALTERNATIVE, AS CALCULATED IN THE 1995 SUPPLEMENTAL PEST RISK ASSESSMENT

Program alternative	Pest	Outbreak frequency (per year)	
		Mode	Mean
A—No specific mitigation program	Fruit flies	0.0139 or 1 chance in 72	0.0518 or 1 chance in 19
	Seed weevils	0.0105 or 1 chance in 95	0.0419 or 1 chance in 24
	Stem weevil	1.389 or 1 chance in 0.7	5.183 or 1 chance in 0.2
	Seed moth	0.00282 or 1 chance in 355	0.0120 or 1 chance in 83
B—Systems approach for risk mitigation	Fruit flies	8.64×10^{-8} or 1 chance in 12 million	3.57×10^{-7} or 1 chance in 3 million
	Seed weevils	6.66×10^{-7} or 1 chance in 1.5 million	3.13×10^{-6} or 1 chance in 320,000
	Stem weevil	8.77×10^{-5} or 1 chance in 11,042	0.000387 or 1 chance in 2600
	Seed moth	1.87×10^{-7} or one chance in 5 million	8.98×10^{-7} or one chance in 1.1 million

Following our review of the comments received from the public regarding the July 3, 1995, proposed rule, APHIS made modifications to the systems approach that had not been considered in the 1995 supplemental pest risk assessment. The changes that appeared in the February 5, 1997, final rule are:

1. Fallen fruit must be removed from the orchard no less frequently than every 7 days during harvest.

This change affected the estimates for node P1 (Probability pest infests fruit: pre- or postharvest).

2. The number of fruit inspected from each lot was increased from 250 to 300.

This change affected estimates for node P2 (Probability pest not detected during harvest or packing).

3. A sticker identifying the packinghouse must be placed on each individual fruit imported under the program.

This change affected both the probability that the pests would evade detection at the ports of entry (P4) and the probability that fruit will be transported to a habitat with suitable hosts and climate (P5).

As a consequence of these changes, APHIS revised the calculations presented in the 1995 supplemental pest risk assessment for the likelihood of introduction under the mitigation program. The revised calculations were reported in the 1996 addendum to the supplemental pest risk assessment. The revised calculations were intended to estimate how much further risk reduction would be achieved by the additional measures. Since the risk, prior to these modifications, was already deemed insignificant, the revised calculations of the addendum (shown in the table below) were not considered necessary for publication of the final rule.

TABLE 2.—PEST OUTBREAK FREQUENCY: MEXICAN AVOCADO PESTS, BY PROGRAM ALTERNATIVE—INPUT VALUES BASED ON THE 1997 DRAFT FINAL RULE

Program alternative	Pest	Outbreak frequency (per year)	
		Mode	Mean
B—Systems approach for risk mitigation	Fruit flies	8.89×10^{-11} or 1 chance in 11 billion	4.85×10^{-8} or 1 chance in 21 million
	Seed weevils	5.76×10^{-9} or 1 chance in 173 million	4.01×10^{-7} or 1 chance in 2.5 million
	Stem weevil	3.08×10^{-6} or 1 chance in 325,000	1.03×10^{-4} or 1 change in 9708
	Seed moth	3.60×10^{-9} or 1 chance in 278,000	1.19×10^{-7} or 1 chance in 8 million

Identification of Susceptible Areas for the Establishment of Anastrepha spp. Fruit Flies in the United States and Analysis of Selected Pathways

This document reviews the risk associated with *Anastrepha* spp., especially in relation to these pests as they occur in U.S. fruit imports from Mexico. It focuses on the likelihood that *Anastrepha ludens* (Mexfly), *A. serpentina, A. striata* and *A. fraterculus* could become established in the United States via the Mexican avocado pathway. The study described in the document was motivated by U.S. grower concerns that existing and proposed changes in import patterns will pose increased risks to American agricultural productivity and profitability. This document represents the U.S. portion of a project by a subcommittee of the NAPPO Pest Risk Assessment Panel, and is intended to be published as part of a larger NAPPO document when Mexico and Canada's portions of the document are complete.

Paraphrasing from the document, the approach used was to first examine the resource at risk (commercial fruit production), then characterize host susceptibility (timing and location of susceptible fruit) and characterize climatology so as to study pest reproduction potential as a function of the previous factors. This approach can be characterized as an epidemiological analysis. The avocado pathway was used as a case study for the risks associated with fruit imports. The study used fruit cutting, pest survey, and

trapping data that have been recorded since the initiation of the avocado import program to determine the probability that fruit flies are passing undetected along this pathway.

Epidemiologically, the study concludes that a combination of factors, primarily the Hass avocado's status as a poor to inadequate fruit fly host and the marginal conditions for fruit fly development in the growing areas, leads to low fruit fly densities in production areas. They note that *Anastrepha* spp. favor peaches, citrus, and other species of fruit over avocados. Statistically, the study demonstrates that the probability is near zero that fruit fly infestations (even very low-level infestations) are going undetected in inspections under the current avocado import program. That is, the statistical evidence suggests that if infestations were even as low as 1 *Anastrepha* spp. larva per 100,000 fruit, they would be detected with likelihood greater than 95 percent. The study concludes that the existing *Anastrepha* populations in Mexico, given the cropping and pest management practices currently in use there, are too low to be a threat to agriculture in the States currently approved to receive imported Mexican avocados or in the States that we are proposing to allow to receive imported Mexican avocados.

The study concludes that the highest likelihood for the potential spread of Mexfly in the United States is concentrated in portions of the States of Arizona, California, Florida, Georgia, Louisiana, South Carolina, and Texas. The State of Hawaii showed the highest risk for the establishment of *Anastrepha* spp. A combination of limited host availability, a short period of climate conducive to *Anastrepha* spp. development, and lethal low temperatures for prolonged periods causes most of the continental United States outside of those States to be at low risk from these fruit fly species.

Program Reviews, Shipping and Inspection Data, and Trapping Data

In May 2001, APHIS completed a review of the Mexican Hass avocado import program. The review was triggered by a request from a representative of the California Avocado Commission. As part of the review, a team of several APHIS officials conducted a site visit to avocado production areas in Michoacan, Mexico, in September 2000. The site visit team observed trapping and orchard sanitation practices in Michoacan and concluded that the program was being operated in compliance with the regulations.

The current regulations in § 319.56–2ff require that Mexican avocado-producing municipalities and orchards that wish to participate in the U.S. import program must fulfill certain obligations regarding pest surveys. The municipality must be surveyed at least annually and found to be free of the large avocado seed weevil (*Heilipus lauri*), the avocado seed moth (*Stenoma catenifer*), and the small avocado seed weevils (*Conotrachelus aguacatae* and *C. perseae*). Trapping must be conducted in the municipality for Mediterranean fruit fly (Medfly) (*Ceratitis capitata*) at the rate of 1 trap per 1 to 4 square miles. The orchard and all contiguous orchards and properties must be surveyed annually and found to be free from the avocado stem weevil (Copturus aguacatae). Trapping must be conducted in the orchard for the fruit flies *Anastrepha ludens, A. serpentina,* and *A. striata* at the rate of 1 trap for each 10 hectares.

Data from these various trapping and survey programs, as well data on the number of fruit shipped, the number of fruit intercepted outside of the approved States, and the number of fruit cut and inspected are now available for the four shipping seasons that the import program has been in place (1997–1998 through 2000–2001). These data are summarized in the tables below.

TABLE 3.—NUMBER OF MEXICAN HASS AVOCADO FRUIT ENTERING THE UNITED STATES

Season	Shipments	Boxes	Fruit
1997–1998	347	537,850	25,816,800
1998–1999	560	868,000	41,664,000
1999–2000	669	1,036,950	49,773,600
2000–2001	576	895,900	42,854,400
Total	2,152	3,338,700	160,108,800
Average	538	834,675	40,027,200

TABLE 4.—NUMBER OF MEXICAN HASS AVOCADO FRUIT INTERCEPTED OUTSIDE APPROVED STATES

Season	Boxes	Fruit
1997–1998	668	32,064
1998–1999	3,114	149,472
1999–2000	45	2,160
2000–2001	54	2,592
Total	3,881	186,288
Average	970	46,572

TABLE 5.—NUMBER OF MEXICAN HASS AVOCADO FRUIT CUT AND INSPECTED

[All fruit cut and inspected were negative for target pests. Orchard and packinghouse inspections were joint Mexican (SAGARPA) / United States (APHIS) inspections. Border inspections were conducted by U.S. inspectors.]

Season	Orchard (SAGARPA/ APHIS)	Packinghouse (SAGARPA / APHIS)	At Border (APHIS)	Total
1997–1998	1,155,305	417,900	10,410	1,583,615
1998–1999	1,121,471	203,250	16,800	1,341,521

TABLE 5.—NUMBER OF MEXICAN HASS AVOCADO FRUIT CUT AND INSPECTED—Continued

[All fruit cut and inspected were negative for target pests. Orchard and packinghouse inspections were joint Mexican (SAGARPA) / United States (APHIS) inspections. Border inspections were conducted by U.S. inspectors.]

Season	Orchard (SAGARPA/ APHIS)	Packinghouse (SAGARPA / APHIS)	At Border (APHIS)	Total
1999–2000	952,423	166,650	20,070	1,139,143
2000–2001	1,209,814	172,800	17,280	1,399,894
Total	4,439,013	960,600	64,560	5,464,173
Average	1,109,753	240,150	16,140	1,366,043

TABLE 6.—MEXICAN FRUIT FLY TRAPPING DATA

Year	Number of fruit flies trapped during current and proposed shipping seasons by municipality			
	Periban	Salvador Escalante	Tancitaro	Uruapan
1997	0	0	0	0
1998	0	0	3 (Nov)	0
999	0	0	0	0
2000	0	4 (Jan) 4 (Feb) 3 (Mar) 2 (Apr)	0	0

The May 2001 program review document, as well as complete import, inspection, fruit cutting, and survey data sets are available by contacting the person listed under **FOR FURTHER INFORMATION CONTACT** and via the Internet at http://www.aphis.usda.gov/ppq/avocados/.

Evaluation of the Applicability of Existing Risk Analyses to Proposed Changes to the Mexican Hass Avocado Import Program

The changes proposed in this document would directly affect the estimates of risk in the 1995 risk management analysis, the 1995 supplemental pest risk assessment, and the 1996 addendum that relate to ''limited distribution'' of Hass avocados in the United States (19 Northeastern States and District of Columbia) and ''winter shipping only'' (November through February).

The 1995 risk management analysis concluded that ''winter shipping only'' reduces the pest risk presented by fruit flies. In the risk management analysis, we estimated a risk reduction between 60 and 90 percent for fruit flies, given the ''winter shipping only'' restriction. According to the risk management analysis, the majority of reduction in pest risk from this mitigation measure can be attributed to limited adult fruit fly activity under colder temperatures in the growing areas in Mexico. Given this assumption, the question arises: Would extending the shipping season for 2 additional months to include March and April result in fruit being shipped from orchards with high rates of adult fruit fly activity? Trapping data collected as required by the current program would indicate this is not the case. In 4 years of trapping, only five fruit flies have been captured during the months of March and April. All five of those captures (three in March and two in April) occurred in a single season (2000) and in a single municipality (Salvador Escalante.) Climatological data presented in the document entitled ''Identification of Susceptible Areas for the Establishment of *Anastrepha* spp. Fruit Flies in the United States and Analysis of Selected Pathways'' (referred to below as Sequeira, *et al.*) indicate that even in the very unlikely event fruit flies were shipped with Mexican Hass avocados, escaped detection, and arrived during the months of March or April, temperatures in the approved and proposed States would still fall below the optima for fruit fly activity.

Furthermore, Sequeira, et al., concluded that sampling evidence and statistical analysis showed that the likelihood of introducing a mating pair in shipments of up to a million avocados is low.

The risk management analysis estimated that limiting U.S. distribution would significantly reduce the risk of all nine analyzed pests. The reduction was estimated to range from 95 to 99 percent for all of the pests except the avocado stem weevil (90 to 99 percent) and hitchhikers (75 to 95 percent). The authors attributed this reduction to the low prevalence of host material and the reduced likelihood of survival of these generally tropical or subtropical pests in northern U.S. States. The same is true for the 12 States proposed for addition to the list of approved States. According to Sequeira, *et al.*, none of the additional States supports the growth of avocado, the sole host of avocado seed and stem weevils and the preferred host of the seed moth. Although the weather conditions appropriate for *Anastrepha* spp. include a wider range of temperatures, prolonged low winter temperatures inhibit fruit fly establishment. According to Sequeira, *et al.*, winter temperatures are low enough to prevent establishment in all of the States that we are proposing to add to the list of approved States.

The pest risk assessment qualitatively estimated the PRP for the avocado seed weevils, stem weevil, seed moth, and fruit flies based on the pests' climatic needs, host range, dispersal potential, economic impact, and environmental impact. The addition of the 12 proposed States to the list of approved States and the extension of the shipping season do not alter host availability, nor would they be expected to appreciably impact the other risk elements that comprise the PRP. Consequently, the PRP ratings would be expected to remain at medium for seed weevils, stem weevil, and seed moth and high for fruit flies.

The 1995 supplemental pest risk assessment used scenario analysis and Monte Carlo simulation to probabilistically estimate the likelihood of introducing the above-named pests into the United States via imports of Mexican Hass avocados. The risk model for the analysis was comprised of seven nodes corresponding to specific independent events that must occur in order for a pest to be introduced. The impact of the proposed changes in the avocado program and the body of data collected under the current program are summarized below.

F1: Frequency of Shipments (Number of Boxes Imported Per Year)

The 1995 supplemental pest risk assessment (as well as the 1996 addendum) estimated that between 1 and 2 million boxes of fruit would be imported under the systems approach program. The actual number of boxes imported fell short of the minimum in all but 1 of the 4 years the program has been in place. As indicated in Table 3 above, the program averaged only 834,675 boxes per year. Because of this, we believe that the 1995–1996 assessments actually overestimated the risk. It also means that even if the addition of 12 States to the program doubled the number of imported Hass avocados, the actual number of imported boxes would still fall within the range of values in the 1995–1996 estimate, and the existing results would remain valid. Given that, as a whole, the population of the 12 additional States is less than the 19 States currently approved, it seems likely that the number of imported boxes would not actually double, and the number of boxes would continue to fall within the range predicted by the existing estimate for F1.

P1: Probability Pest Infests Fruit: Pre- or Postharvest

The 1996 addendum to the supplemental pest risk assessment estimated that the value for P1 would range between 5×10^{-8} and 5×10^{-6} for the fruit flies, between 5×10^{-6} and 5×10^{-5} for the seed weevils, between 1×10^{-3} and 1×10^{-2} for the stem weevil, and between 5×10^{-6} and 5×10^{-5} for the seed moth. One might suspect that the risk of Mexican Hass avocados being infested with fruit flies (if one accepts that Hass avocado is a host for fruit flies) would increase as the shipping season was extended into March and April based on the assumption that as temperatures warmed, fruit flies would become more active. However, as described above, fruit fly trapping data do not support the assumption that there is significant adult fruit fly activity in Michoacan avocado orchards in March and April. Likewise, fruit cutting in the orchards has produced no finds of any of the pests of concern, even after sampling nearly 4.5 million fruit over the course of 4 growing seasons. Similarly, no pest detections have been made after cutting nearly 1 million fruit in packinghouse inspections. To date, nearly 3.4 million boxes of Mexican Hass avocados have been shipped to the United States under the import program with no target pest finds. These data suggest that, even with an increase in the volume of imports, the original risk assessment numbers still represent a reasonable estimate and may even overestimate the likelihood that pests will infest program fruit.

P2: Probability Pest Not Detected During Harvest or Packing

The proposed changes to the import program would not impact the estimates for this node. It is worth noting, however, that in the four shipping seasons under the current program, no target pests have been detected after nearly 1 million fruit have been inspected by cutting at the packinghouse (see Table 5).

P3: Probability Pest Survives Shipment

The proposed changes to the import program would not impact the estimates for this node.

P4: Probability Pest Not Detected at Port of Entry Inspection

The proposed changes to the import program would not impact the estimates for this node. It is worth noting, however, that in the four shipping seasons under the current program, no target pests have been detected after nearly 65,000 fruit have been inspected by cutting at the port of entry (see Table 5).

P5: Probability Fruit Is Transported to Area With Suitable Hosts and Climate

As stated above, according to Sequeira, et al., none of the States proposed for addition to the list of approved States supports the growth of avocado, the sole host of avocado seed and stem weevils and the preferred host of the seed moth. Likewise, all of the States we are proposing to add to the list of approved distribution areas pose a low risk for the establishment of *Anastrepha* spp. fruit flies even in the very unlikely event any would be imported on Mexican Hass avocados. For similar reasons, the proposed change in the western transit boundary for Mexican Hass avocados would not affect any existing risk estimates.

The 1995 supplemental pest risk assessment estimated that between 0.5 percent and 5.0 percent of the imported Hass avocado would be transported to an area with suitable hosts and habitat. This was assumed to be the result of either inadvertent or intentional (smuggling) movement to nonapproved avocado-growing or fruit fly-supporting States. The 1996 addendum to the supplemental pest risk assessment reduced these estimates to between 0.05 percent and 2.0 percent as a consequence of the requirement for stickering that was included in the February 1997 final rule.

Actual data for seizures of fruit outside the approved States (see Table 4) indicate that in the 1997–1998 and 1998–1999 shipping seasons, 0.12 percent and 0.36 percent of boxes of imported Mexican Hass avocados were intercepted outside of the approved States. Assuming, for the purposes of this discussion, that all of these intercepted boxes ended up in areas with suitable hosts and climates, the actual values fall well within the range of predicted values. Beginning midway through the third year of the program (1999–2000), a more stringent compliance requirement became effective. Consequently, in the 1999–2000 and 2000–2001 shipping seasons, 0.004 and 0.006 percent of the imported boxes of Mexican Hass avocados were intercepted outside of approved States (see Table 4). Given the reduced levels of fruit leaving the approved States under the stronger compliance requirement, even if one assumes not all diverted fruit is intercepted, the estimates in the 1995 and 1996 risk assessments are, at the very least, accurate and more likely overestimate the likelihood that fruit will be transported to an area with suitable hosts and climate.

P6: Probability Infested Fruit in Suitable Habitat Leads to Outbreak

The proposed changes to the import program would not impact the estimates for this node.

Conclusion

We have reviewed the documents summarized above and find that the evidence, assumptions, and conclusions of the 1995 risk management analysis and the 1995 supplemental pest risk assessment and its 1996 addendum would remain valid even if the proposed changes are made to the Mexican Hass avocado program. Therefore, we have determined that the importation of Hass avocados from Mexico in accordance with the existing regulations as modified by this

proposed rule would present a negligible risk of introducing plant pests into the United States.

Discussion of Comments Received in Response to the May 2000 Notice

Some commenters expressed concern over the number of violations that occurred during the first 2 years of the avocado import program. The commenters requested that the program be terminated because imported Hass avocados have not been completely contained within the limited distribution area. The comments expressed concerns over the number of shipments of Mexican avocados that were moved illegally to States where temperatures are higher, there is more suitable host material available, and the risk of introduction of a plant pest of concern is greater.

During the first 2 years of the Hass avocado import program, boxes of avocados were diverted to States that were not listed as approved for distribution. APHIS conducted investigations and prosecuted several distributors for violations of the regulations. However, the pest risk analysis prepared for the rulemaking that established the current program to import Hass avocados from Mexico takes into account the expected diversion of some avocados to States not approved to receive them. The amount of avocados that were diverted during the first 2 years of the Hass avocado import program did not exceed the estimate used in the calculations of risk.

To help reduce the number of boxes of avocados diverted to nonapproved areas, we amended the regulations (see 64 FR 68001–68005) during the third (1999–2000) shipping season to require that all distributors of Hass avocados enter into a compliance agreement with APHIS that fully explains the distribution restrictions and the distributor's obligations. Before the 1999–2000 shipping season, we conducted an information campaign to inform the public and industry about Mexican avocados and published press releases regarding penalties for violations during previous seasons. The 1999–2000 season had a 20 percent increase in number of boxes of avocados shipped from Mexico to the United States, but only 45 boxes were intercepted in States not approved to receive them (see Table 4 under the heading *Risk Assessment Documentation Supporting the Proposed Rule*). This is 1.5 percent of the number of boxes diverted in the previous (1998–1999) season.

Some commenters stated that fruit flies and stem weevils do exist in the areas of production in Michoacan, Mexico, and expressed concern about the constant danger of infestation or reinfestation of avocado orchards from neighboring orchards and from untreated backyard grown host plants in the production areas.

The risk assessment documents used as the basis for the existing program take into account that fruit flies and stem weevils exist in avocado production areas in Mexico. The regulations in § 319.56–2ff require that trapping must be conducted in the orchard for the fruit flies *Anastrepha ludens, A. serpentina,* and *A. striata* at the rate of one trap per 10 hectares. If one of those fruit flies is trapped, at least 10 additional traps must be deployed in a 50-hectare area immediately surrounding the trap in which the fruit fly was found. If within 30 days of the first finding any additional fruit flies are trapped within the 260-hectare area surrounding the first finding, malathion bait treatments must be applied in the affected orchard in order for the orchard to remain eligible to export avocados.

In addition, the regulations require that the orchards where avocados are grown and all contiguous orchards and properties be surveyed annually and found to be free from the avocado stem weevil *Copturus aguacatae.* The survey must be conducted during the growing season and completed prior to the harvest of the avocados. If Sanidad Vegetal (Mexico's plant protection organization) discovers the stem weevil in an orchard during an orchard survey or other monitoring or inspection activity in the orchard, Sanidad Vegetal must provide APHIS with information regarding the circumstances of the infestation and the pest risk mitigation measures taken and the orchard in which the pest was found will lose its export certification immediately and will be denied export certification for the entire shipping season. Further, if Sanidad Vegetal discovers the stem weevil in fruit at a packinghouse, Sanidad Vegetal must investigate the origin of the infested fruit and provide APHIS with information regarding the circumstances of the infestation and the pest risk mitigation measures taken. The orchard where the infested fruit originated will lose its export certification immediately and will be denied export certification for the entire shipping season.

Survey information from trapping in avocado orchards, and fruit cutting in avocado orchards, packinghouses in the production areas in Mexico, and at the border when shipments enter the United States, show that avocados imported under the Mexican Hass avocado import program are not infested by any pest of concern (see Table 5 under the heading *Risk Assessment Documentation Supporting the Proposed Rule*). Based on these surveys, we believe the elements of the systems approach regulations described above protect against infestation or reinfestation of avocado orchards from neighboring orchards and from untreated, backyard-grown host plants in the production areas.

Some commenters stated that there are other hosts for fruit flies that APHIS has not considered that grow or are being cultivated in States where expanded avocado distribution is proposed. The commenters suggest that we need information from extension services in States where distribution is proposed in order to identify what alternate hosts are present and available for infestation. One comment stated that all but five States in the United States have plants that are suitable hosts for fruit flies, and that seven States (AL, AZ, CA, GA, FL, LA, and TX) grow suitable host plants that are valued at $3 billion.

As stated earlier in this document, APHIS recently completed the U.S. portion of a NAPPO project, entitled ''Identification of Susceptible Areas for the Establishment of *Anastrepha* spp. Fruit Flies in the United States and Analysis of Selected Pathways'' (Sequeira, et al., 2001), that identifies areas in the United States that are susceptible to the establishment of fruit flies. In conducting this study, we did contact extension services in States where expansion of the distribution area is proposed. The information that we received from extension services on alternate hosts cultivated in those States and on wild host material common in those States was used in the development of the Sequeira, *et al.,* study.

The Sequeira, et al., study identifies U.S. States that have suitable host material for fruit flies. Based on the findings of the Sequeira, et al., study and the other risk documents discussed in this document, we are not proposing to allow avocados to be imported into any of the seven States listed above by the commenter (AL, AZ, CA, GA, FL, LA, and TX).

Some commenters asserted that our determinations on when and where to allow importations of Hass avocados from Mexico depend too much on temperature data alone. Commenters suggested that we should consider other climactic factors that also play a role in the establishment of fruit flies.

We agree with the commenters that any determination regarding when and

where avocados may be distributed in the United States should be based on a study of all relevant climate-related factors. For the 1995 and 1996 risk documents, we used only temperature data in considering the risk posed by imported Mexican Hass avocados. However, the Sequeira, et al., study, which is described above, considers and evaluates the effects of the following climate-related variables on potential fruit fly establishment:

- The presence of fruit fly hosts and their seasonal and geographical availability.
- Reproduction potential of fruit flies at various temperatures.
- Selection of areas where temperatures are warm enough for a long enough period of time to support reproducing fruit fly populations.

Some commenters suggested that we use several verifiable and reliable sources of temperature data in determining monthly and daily mean, minimum, and maximum temperatures in Mexico.

We believe that additional temperature data for production areas is not necessary for the purposes of this proposed rule. As stated elsewhere in this document, trapping, survey, and fruit cutting data for production areas in Mexico show that imported avocados are not infested with any pests of concern. We believe that such data provide a more accurate estimate of pest presence in avocado production areas than the consideration of additional temperature data would.

Some commenters requested that we wait until the NAPPO Fruit Fly Panel completes its investigation into the susceptibility of areas for the establishment of fruit flies until we move forward with this proposed rule. The NAPPO Fruit Fly Panel requested the NAPPO Pest Risk Assessment Panel to conduct a study using modeling, climatology, and phenology to determine where fruit flies could become established in North America.

Again, the Sequeira, et al., study described above represents the U.S. portion of the NAPPO project. The study provides part of the basis for our decision to expand the Mexican Hass avocado import program to include 12 more States and to lengthen the shipping season by 2 months. We are not basing our proposal to allow the expanded importation of Mexican Hass avocados on the findings of the other portions of the NAPPO project and see no reason to wait for their completion.

Some commenters criticized as inadequate the survey techniques used in the areas of production in Michoacan, Mexico, to determine population levels of pests of concern, stating that McPhail traps are ineffective, avocado stem weevils are surveyed in the wrong season, and reliable surveys for avocado seed moths are not conducted.

We believe that the required trap density of 1 trap per 10 hectares will be sufficient to indicate the presence of fruit fly populations in the orchards. In the United States, the national detection protocol for *Anastrepha* ranges from 1 trap per 10 square miles to 5 traps per square mile; the Rio Grande Valley and Florida citrus protocol for *Anastrepha* ranges from 5 to 15 traps per square mile. The density required in the Mexican orchards—1 trap per 10 hectares—works out to approximately 25 traps per square mile, which is the same density required to maintain the fruit fly-free zone in the Mexican State of Sonora. With regard to the type of traps used, we believe that some of the other traps currently available may be comparable to the McPhail trap, but none are better for monitoring for *Anastrepha* fruit flies. Further, the surveys for avocado stem weevils and seed moths are conducted twice a year and include a survey in the spring when pest numbers are the highest. These surveys use the most effective available methods for detecting the pests.

One commenter stated that APHIS should assess the potential for introduction of other Mexican insect pests that could infest crops grown in the United States. The commenter cited introductions of the Persea mite (*Oligonychus perseae*) and avocado thrip (*Scirtothrips perseae*) into California as cause for concern.

As stated earlier in this document, in our 1995 supplemental pest risk assessment, APHIS identified a list of 91 pests of avocado in Mexico (26 pathogens and 65 arthropods). Of the 91 pests identified, 32 (2 pathogens and 30 arthropods) satisfy the geographic and regulatory criteria for designation as a quarantine pest. Of these 32 quarantine pests, only 9 arthropods are expected, based on their biology, to follow the pathway of imported Mexican Hass avocado fruit.

The persea mite (*Oligonychus perseae*) and avocado thrip (*Scirtothrips perseae*) are currently established in the United States, and are not under official control, and therefore, do not meet the definition of a quarantine pest. Pests that do not satisfy internationally accepted criteria for designation as quarantine pests are not analyzed in detail in risk assessments because nonquarantine pests are not candidates for risk mitigation. Although *O. persea* and *S. perseae* should have been listed on the pest list, their inclusion would not have changed the supplemental pest risk assessment beyond the pests listed in table 3. Listing of *O. persea* and *S. perseae* in table 3 would not have changed the findings of the risk assessment and would not have altered the proposed mitigation program, which focuses on quarantine pests.

One commenter questioned if surveys have been conducted in Michoacan within the context of limited pesticide use, since pesticides can mask the presence of pest species during surveys but do not eliminate pests possibly present in or on fruit eligible for export.

APHIS pest surveys include areas with backyard and feral avocado trees and groves. We believe that surveying such areas provides a context to examine the presence of pests in a limited pesticide use context.

One commenter suggested that the States bordering avocado-producing States should be considered buffer States. Buffer States should not be eligible to receive Mexican Hass avocados due to their proximity to avocado producing areas.

We have not proposed to allow Mexican Hass avocados to be distributed in any State that borders California, Florida, and Texas, the only U.S. States that produce avocados.

One commenter asked that the Government of Mexico be required to submit detailed workplans to APHIS and to growers in the United States, with survey protocols, orchard management practices, and inspection reports from site visits to observe the program in Mexico.

The Government of Mexico and APHIS already agree upon such an operational workplan, which is reviewed and updated annually and shared with the California Avocado Commission. Since the avocado import program began, APHIS has conducted two comprehensive reviews, which are available to the public as described earlier in this document.

Some commenters argued that we should conduct a new pest risk analysis and include new data and new developments in risk assessment methodology made available since the original assessment was completed in 1995.

We believe that the 1995 and 1996 risk documents, in conjunction with the Sequeira, et al., study and 4 years of trapping and shipping data, provide a sound scientific basis for this proposed rule. APHIS' review and consideration of the existing pest risk analysis for the avocado program is described in the information memo for the record mentioned earlier in this document. The information memo for the record

explains our proposal to expand the area of distribution to include 12 more States and lengthen the shipping season by the months of March and April and is supported by the documents described above under the heading *Risk Assessment Documentation Supporting the Proposed Rule.* We acknowledge that there have been developments in risk methodology since 1995, but there are no new methodologies that would substantively alter the findings of the pest risk analysis used for the 1997 final rule.

Further, APHIS does not intend to conduct a new risk assessment for this proposed rule because the relevant information that would be needed to complete a new risk assessment is already available in the risk documents that we used as a basis for this proposed rule. We believe that the ''Information Memo for the Record'' (April 30, 2001) described earlier in this document synthesizes the findings of the various risk documents and provides a clear statement that this proposed rule presents a negligible risk of introducing plant pests into the United States.

One commenter suggested that we use a mean monthly temperature of 50 degrees in destination States to determine their eligibility to receive Mexican Hass avocados, because fruit flies can successfully reproduce at 55 degrees. The comment also suggested that Mexican Hass avocados should not be approved for destination States where alternate host material is available up to 3 months after the shipping season ends, because a partially mature fruit fly can live as long as 3 months after shipping.

While it is possible that fruit flies could survive and reproduce in an area with a mean monthly temperature of 55 degrees, other factors play a role in determining whether fruit flies could survive in a given environment. The Sequeira, et al., study described above considers temperature and the presence of suitable host material, as well as other factors, to identify the areas in the United States that are not at risk for the introduction of fruit flies. We believe this type of study provides a more accurate identification of areas in which fruit flies can survive than an analysis based on mean monthly temperatures alone.

One commenter suggested that APHIS approve the month of April for the lengthened shipping season, rather than October, because October is warmer than April.

In our May 2000 request for comments, we stated that Mexico had requested that APHIS allow the Hass avocado shipping season to begin 1 month earlier (October rather than November) and end 1 month later (March rather than February). As stated earlier in this document, since the request for comments was published, Mexico has requested that avocados be allowed to be shipped year round. After a review of temperature and fruit fly survey data for Mexico and a review of phenological data for the United States, we are proposing to lengthen the shipping season of Hass avocados by 2 months, from November to April. Fruit fly trapping data for the approved municipalities in Michoacan show that in recent years, fewer fruit flies have been trapped in April than October. Based on the available trapping data, and the findings of the Sequeira, et al., study, we believe the pest risk posed by allowing Hass avocados to be imported in March and April would be no greater than it is for the current shipping season.

One commenter suggested that we develop temperature data for all species of the pests of concern, not just for fruit flies.

The other species of pests found on avocados are host-specific, and therefore are only able to live with avocados as their food source, whereas fruit flies can attack other crops than avocados. Since the proposed rule would allow distribution of Mexican Hass avocados only in areas where avocados are not grown, we see no reason to consider temperature and other climatic data for avocado pests other than fruit flies at this time.

Some commenters critiqued the pest risk analysis used to establish the present importation program for Hass avocados from Mexico. They asserted that we should not have used median temperatures in our calculations, but rather we should have used mean daily maximum temperatures, which are more scientifically sound.

The 1995 supplemental pest risk assessment that provided the basis for the proposed and final rules that established the current avocado import program did, as noted by the commenters, use monthly median temperatures in determining what areas in the United States and Mexico are susceptible to fruit fly infestations. While we continue to believe that the conclusions of the 1995 supplemental pest risk assessment are valid, we do agree with the commenters that using daily temperature data provides a more accurate estimate in determining what areas are susceptible to fruit fly infestations. The Sequeira, et al., study, which provides the primary basis for the proposed expansion of the current program, does use daily maximum and minimum temperatures to determine the susceptibility of areas of the United States to the establishment of fruit flies, as suggested by the commenters. We believe that the Sequeira, et al., study, in conjunction with the other risk documents discussed in this document, provide a sound scientific basis for this proposed rule.

Another commenter stated that fruit flies are hardier and more long-lived than we estimated in the calculations for our 1995 and 1996 risk assessment documents.

In node P3 of the risk model used in the 1995 supplemental pest risk assessment, we estimated that in the highly unlikely event that imported Mexican Hass avocados were infested with fruit flies, there is a 70 to 90 percent chance that the fruit flies could survive shipment to the United States. Once in the United States, the fruit flies would have to escape detection at the port of entry (considered in node P4) and be transported to areas with suitable hosts and climate (node P5). Consistent with the findings of the 1995 supplemental pest risk assessment and the 1996 addendum to it, the Sequeira, et al., study shows that during the proposed shipping season of November to April, the current and proposed avocado distribution areas would not provide the host material and climatic conditions necessary for the survival of fruit flies. For these reasons, we concluded, and continue to believe, that the likelihood that fruit flies could become established in the United States via imported Mexican Hass avocados is extremely low.

Some commenters submitted temperature and other data in response to our request for data regarding Mexico's request that APHIS expand the area of distribution and the length of shipping season for Mexican Hass avocados. All such information was considered in the development of the Sequeira, et al., study.

Executive Order 12866 and Regulatory Flexibility Act

This proposed rule has been reviewed under Executive Order 12866. The rule has been determined to be significant for the purposes of Executive Order 12866 and, therefore, has been reviewed by the Office of Management and Budget.

For this proposed rule, we have prepared a regulatory impact analysis. The regulatory impact analysis also contains an initial regulatory flexibility analysis, which considers the potential economic effects of this proposed rule on small entities, as required under 5 U.S.C. 603. The regulatory impact

analysis and regulatory flexibility analysis are summarized below. Copies of the full analysis are available by contacting the person listed under **FOR FURTHER INFORMATION CONTACT,** or on the Internet at http://www.aphis.usda.gov/ppq/avocados/. We do not currently have all of the data necessary for a comprehensive analysis of the effects of this proposed rule on small entities. Therefore, we are inviting comments on potential effects. In particular, we are interested in determining the number and kind of small entities that may incur benefits or costs from the implementation of this proposed rule.

Under the Plant Protection Act (7 U.S.C. 7701–7772), the Secretary of Agriculture is authorized to regulate the importation of plants, plant products, and other articles to prevent the introduction of injurious plant pests.

Summary of Regulatory Impact Analysis

Our analysis considers economic impacts on U.S. producers and consumers/ merchandisers of Hass avocados that could result from allowing fresh Hass avocados from Michoacan, Mexico, to be imported into additional areas of the United States and over a longer period each year than is currently allowed. Since the 1997/98 season, imports of avocados from approved orchards in Michoacan, Mexico, have been allowed to be imported into the United States and distributed in Connecticut, Delaware, the District of Columbia, Illinois, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and Wisconsin during the months of November through January. Under this proposed rule, distribution would be expanded to include the States of Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. The shipping season would also be expanded to include March and April.

We are proposing this action in response to a request from the government of Mexico, and after determining that this action would present a negligible risk of introducing plant pests into the United States.

Impacts on U.S. producers and consumers/merchandisers would derive from the increased supply of Hass avocados from Mexico and concomitant price declines. Essentially all domestically produced Hass avocados are grown in California. U.S. producers and California producers are therefore used interchangeably in the analysis. The 1997 rule that first allowed for the importation of Mexican Hass avocados to 19 states and the District of Columbia resulted in a redistribution of California-grown Hass avocados from markets in the approved States during the months that imports are allowed from Mexico. This proposed rule, if adopted, is expected to have a similar effect. Anecdotal experience suggests that benefits resulting from the existing rule have been largely realized at the wholesale level, and discussion of consumer gains therefore includes explicit reference to merchandisers as well.

In our analysis, we use two models are used to estimate impacts. The first is a nationwide model that does not distinguish between the approved and nonapproved States. The rationale underlying this model is that given sufficient time, a single price for avocados would obtain in the two regions. Although Mexico's supply is restricted to the approved States for specified months of the year, California and other foreign suppliers can move in and out of the two markets, and would do so in search of profits until prices in the approved and nonapproved States essentially equalize.

The second model explicitly recognizes the approved and nonapproved States as two regions. Estimated economic losses include direct market loss for California producers in approved States, and losses related to increased supply in nonapproved States, as the diversion of California Hass avocados from approved to nonapproved States depresses prices. Consumers/merchandisers would be expected to gain in both approved and nonapproved States from the lower prices. A theoretical limitation of the regional model, in contrast to the national model, is the assumed maintenance of a price differential between the approved and nonapproved States.

Both models use a partial equilibrium economic surplus framework to consider benefits and costs of the proposed rule. Potential producer losses and consumer/merchandiser gains are quantified in terms of changes in producer and consumer surplus resulting from the increased imports expected from Mexico. To simplify the analysis, the demand curve is assumed to be of constant elasticity while U.S. supply is assumed to be fixed. The supply curve is assumed to be vertical at least in the short run, that is, supply is perfectly inelastic and does not respond to changes in price.

In the national model, additional Hass avocado imports from Mexico totaling 16.87 million pounds are estimated to result in a 12 percent drop in the wholesale price, from $1.34 per pound to $1.18 per pound. Consumers/ merchandisers would gain by $27.65 million per year and California Hass avocado producers would lose by $17.93 million per year, for a net benefit of $9.72 million per year.

In the regional model, the same level of additional Mexican Hass avocado imports is assumed (16.87 million pounds), an amount equivalent to the maximum quantity assumed could be wholly diverted from approved to nonapproved States. Impacts are examined using three scenarios. In the first scenario, 70 percent of California Hass avocados that would otherwise be sold in the approved States are diverted to nonapproved States; in the second scenario, 85 percent are diverted; and in the third scenario, 100 percent are diverted. The 85 percent diversion scenario is considered representative of what is most likely to occur, given historic changes in quantities of California Hass avocados shipped to the existing approved States due to Mexican imports.

The first scenario of the regional model (70 percent diversion) would mean 6.07 million pounds of California Hass avocados remain in the approved States, and 11.81 million pounds are diverted to the nonapproved States. The additional supply of Mexican Hass avocados results in a price decline that benefits consumers/merchandisers in the approved States by about $10.12 million per year. California producers whose Hass avocados are sold in the approved States face a revenue loss of $17.15 million per year. The net loss in the approved States is $7.03 million per year.

In the nonapproved States, the 11.81 million pounds of California Hass avocados diverted from the approved States result in a price decline that causes a revenue loss of $0.35 million per year for California producers. Consumers/merchandisers in the nonapproved States benefit by $19.31 million per year, for a net benefit of $18.96 million per year.

Net losses in the approved States ($7.03 million per year) and net gains in the nonapproved States ($18.96 million per year) yield an overall net gain of $11.94 million per year in the first scenario.

The second scenario (85 percent diversion) yields producers losses and consumer/ merchandiser gains comparable to the first one. Net losses in the approved States ($13.93 million

per year) and net benefits in the nonapproved States ($22.79 million per year) combine for an overall net gain estimated at $8.87 million per year.

In the third scenario (100 percent diversion), 16.87 million pounds of California Hass avocados are diverted to the nonapproved States. Consumers/merchandisers in the approved States gain by $1.59 million per year, and California's producers lose by $22.64 million per year, for a net loss of $21.05 million per year. Consumers/merchandisers in the nonapproved States gain by $28.14 million per year, and California's producers lose by $1.60 million per year, for a net gain of $26.54 million per year. With 100 percent diversion, net losses in the approved States ($21.05 million per year) and net gains in the nonapproved States ($26.54 million per year) yield a combined net benefit of $5.50 million per year in the third scenario.

In sum, impacts of the proposed rule for U.S. producers and consumers/merchandisers range from net benefits of $11.94 million per year for the 70 percent diversion scenario and $8.87 million per year for the 85 percent diversion scenario, to $5.50 million per year for the 100 percent diversion scenario. The net benefit estimated using the national model, $9.72 million per year, is contained within this range. The overall impact in all cases is minor. In the event the price elasticity of demand is larger than that used in this analysis (−0.86), losses to California producers will be less than those calculated. APHIS requests comments on the appropriate choice of elasticity for the analysis. Another factor that could reduce losses to California producers would be activities to increase the demand for Hass avocados, that is, activities would increase sales at any given price.

Summary of Initial Regulatory Flexibility Analysis

The Regulatory Flexibility Act requires that impacts on small entities be taken into consideration in rulemaking, to ensure that such businesses are not disproportionately burdened. There are about 6,000 producers and 100 handlers of Hass avocados in southwestern California that could be affected by this rule, as well as about 200 importers. APHIS has been unable to obtain information on the size distribution of affected avocado producers, and invites public comment that would help in determining the number of producers that can be considered small. For the purposes of our analysis, we assume that the size distribution of the 6,000 producers is the same as the size distribution of avocado farms reported in the 1997 Census of Agriculture; that is, 98 percent are small entities ($750,000 or less in annual receipts). Most avocado importers are reportedly also small entities (100 or fewer employees, respectively), while most Hass avocado handlers are large (more than $5 million in annual receipts). Given the declines in revenue that are described in the three scenarios of the regional model, average annual losses for small-entity California Hass avocado producers could range between $1,870 and $2,593. This impact could prove significant if producers rely upon Hass avocado production as their principal source of income.

Two variations of the regional model are presented as examples of rule modifications that would mitigate adverse impacts on small-entity California Hass avocado producers. Alternative A would extend the four-month period of import by two months, March and April, but would not expand the region of approved States. Alternative B would maintain the current four-month period of import, but would expand the approved region by the same States as in the proposed rule. For both alternatives, losses to California's Hass avocado producers would be less than have been calculated for the proposed rule. Under the 85 percent diversion scenario, California producer losses would be $12.46 million per year and $2.50 million per year for alternatives A and B, respectively, compared to an annual producer loss of $20.55 million under the proposed rule. However, consumer/merchandiser gains would also be reduced in both cases. Annual net benefits are estimated to be $6.52 million per year for alternative A and $3.67 million per year for alternative B, compared to $8.87 per year for the proposed rule.

There are no other rules that would overlap, duplicate, or conflict with this proposed rule.

This proposed rule contains information collection requirements, which have been submitted for approval to the Office of Management and Budget (see ''Paperwork Reduction Act'' below).

Executive Order 12988

This proposed rule would allow fresh Hass avocado fruit to be imported into the United States from the Mexican State of Michoacan. If this proposed rule is adopted, State and local laws and regulations regarding fresh Hass avocado fruit imported under this rule would be preempted while the fruit is in foreign commerce. Fresh avocados are generally imported for immediate distribution and sale to the consuming public and would remain in foreign commerce until sold to the ultimate consumer. The question of when foreign commerce ceases in other cases must be addressed on a case-by-case basis. If this proposed rule is adopted, no retroactive effect will be given to this rule, and this rule will not require administrative proceedings before parties may file suit in court challenging this rule.

National Environmental Policy Act

An environmental assessment has been prepared for this proposed rule. The environmental assessment documents our review of the environmental impacts associated with this proposed rule. We are making the environmental assessment available to the public for review and comment.

The environmental assessment was prepared in accordance with: (1) The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*), (2) regulations of the Council on Environmental Quality for implementing the procedural provisions of NEPA (40 CFR parts 1500–1508), (3) USDA regulations implementing NEPA (7 CFR part 1b), and (4) APHIS' NEPA Implementing Procedures (7 CFR part 372).

Copies of the environmental assessment are available for public inspection at USDA, room 1141, South Building, 14th Street and Independence Avenue SW., Washington, DC, between 8 a.m. and 4:30 p.m., Monday through Friday, except holidays. Persons wishing to inspect copies are requested to call ahead on (202) 690–2817 to facilitate entry into the reading room. In addition, copies may be obtained by writing to the person listed under **FOR FURTHER INFORMATION CONTACT.** The environmental assessment is also available on the Internet at: http://www.aphis.usda.gov/ppq/avocados/.

Paperwork Reduction Act

In accordance with section 3507(d) of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the information collection or recordkeeping requirements included in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB). Please send written comments to the Office of Information and Regulatory Affairs, OMB, Attention: Desk Officer for APHIS, Washington, DC 20503. Please state that your comments refer to Docket No. 00–003–2. Please send a copy of your comments to: (1) Docket No. 00–003–2, Regulatory Analysis and Development, PPD, APHIS, suite 3C03, 4700 River Road

Unit 118, Riverdale, MD 20737–1238, and (2) Clearance Officer, OCIO, USDA, room 404–W, 14th Street and Independence Avenue SW., Washington, DC 20250. A comment to OMB is best assured of having its full effect if OMB receives it within 30 days of publication of this proposed rule.

In this document, we are proposing to amend the regulations governing the importation of fruits and vegetables to expand the number of States in which fresh avocado fruit grown in approved orchards in approved municipalities in Michoacan, Mexico, may be distributed. We are also proposing to increase the length of the shipping season during which the Mexican Hass avocados may be imported into the United States. This action would require that importers, shippers, distributors, and handlers of Mexican Hass avocados in the United States enter into compliance agreements with APHIS. We are asking OMB to approve our use of this information collections in connection with our efforts to ensure that fresh Hass avocados from Mexico pose a negligible risk of introducing exotic insect pests into the United States.

We are soliciting comments from the public (as well as affected agencies) concerning our proposed information collection and recordkeeping requirements. These comments will help us:

(1) Evaluate whether the proposed information collection is necessary for the proper performance of our agency's functions, including whether the information will have practical utility;

(2) Evaluate the accuracy of our estimate of the burden of the proposed information collection, including the validity of the methodology and assumptions used;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of the information collection on those who are to respond (such as through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology; e.g., permitting electronic submission of responses).

Estimate of burden: Public reporting burden for this collection of information is estimated to average 1.2 hours per response.

Respondents: Importers, shippers, distributors, and handlers of fresh Hass avocados imported into the United States.

Estimated annual number of respondents: 250.

Estimated annual number of responses per respondent: 1.

Estimated annual number of responses: 250.

Estimated total annual burden on respondents: 300 hours.

Copies of this information collection can be obtained from Mrs. Celeste Sickles, APHIS' Information Collection Coordinator, at (301) 734–7477.

List of Subjects in 7 CFR Part 319

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

Accordingly, we propose to amend 7 CFR part 319 as follows:

PART 319—FOREIGN QUARANTINE NOTICES

1. The authority citation for part 319 would continue to read as follows:

Authority: 7 U.S.C. 166, 450, 7711–7714, 7718, 7731, 7732, and 7751–7754; 21 U.S.C. 136 and 136a; 7 CFR 2.22, 2.80, and 371.3.

2. Section 319.56–2ff would be amended as follows:

a. By revising the section heading, the introductory text, and paragraphs (a)(2), (a)(3), and (c)(3)(vii).

b. In paragraphs (e)(2) and (e)(3), by removing the word ''February'' each time it appears and adding the word ''April'' in its place.

c. By revising paragraphs (f)(1), (g), and (i).

§ 319.56–2ff Administrative instructions governing movement of Hass avocados from Mexico to approved States.

Fresh Hass variety avocados (Persea americana) may be imported from Mexico into the United States for distribution in approved States only under a permit issued in accordance with § 319.56–4, and only under the following conditions:

* * * * *

(a) * * *

(2) The avocados may be imported only during the months of November, December, January, February, March, and April; and

(3) The avocados may be distributed only in the following States: Colorado, Connecticut, Delaware, the District of Columbia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Dakota, Ohio, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming.

* * * * *

(c) * * *

(3) * * *

(vii) The avocados must be packed in clean, new boxes. The boxes must be clearly marked with the identity of the grower, packinghouse, and exporter, and the statement ''Distribution limited to the following States: CO, CT, DC, DE, ID, IL, IN, IA, KS, KY, ME, MD, MA, MI, MN, MO, MT, NE, NH, NJ, NY, ND, OH, PA, RI, SD, UT, VA, VT, WV, WI, and WY.''

* * * * *

(f) * * *

(1) Any port located in a State specified in paragraph (a)(3) of this section;

* * * * *

(g) *Shipping areas.* (1) Except as explained in paragraph (g)(3) of this section for avocados that enter the United States at Nogales, AZ, avocados moved by truck or rail car may transit only that area of the United States bounded as follows:

(i) On the east and south by a line extending from Brownsville, TX, to Galveston, TX, to Kinder, LA, to Memphis, TN, to Knoxville, TN, following Interstate 40 to Raleigh, NC, and due east from Raleigh, and

(ii) On the west by following Interstate 10 North from El Paso, TX, to Las Cruces, NM, and north following Interstate 25 to the Colorado border, then west along Colorado and Utah's southern borders, then north along Utah's western border, then west along Idaho's southern border and north along Idaho's western border to the border with Canada.

(2) All cities on the boundary lines described in paragraph (g)(1) of this section are included in this shipping area. If the avocados are moved by air, the aircraft may not land outside this shipping area.

(3) Avocados that enter the United States at Nogales, AZ, must be moved to Las Cruces, NM, by the route specified on the permit, and then must remain within the shipping area described in paragraph (g)(1) of this section.

* * * * *

(i) *Inspection.* The avocados are subject to inspection by an inspector at the port of first arrival, at any stops in the United States en route to an approved State, and upon arrival at the terminal market in the approved States. At the port of first arrival, an inspector will sample and cut avocados from each shipment to detect pest infestation.

* * * * *

Done in Washington, DC, this 9th day of July 2001.

Bill Hawks,

Under Secretary for Marketing and Regulatory Programs, USDA.

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