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**Animal and Plant Health Inspection
Service**

**7 CFR Part 319
Mexican Hass Avocado Import Program;
Final Rule**

DEPARTMENT OF AGRICULTURE**Animal and Plant Health Inspection Service****7 CFR Part 319**

[Docket No. 00-003-4]

RIN 0579-AB27

Mexican Hass Avocado Import Program

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Final rule.

SUMMARY: We are amending the regulations governing the importation of fruits and vegetables to increase 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 lengthening the shipping season during which the Mexican Hass avocados may be imported into the United States. We are taking 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.

EFFECTIVE DATE: November 1, 2001.

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:**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 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. 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 Columbia, 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 September 1999, the Government of Mexico requested that the Animal and Plant Health Inspection Service (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. In general, the majority of commenters supported expanding the area of distribution of Hass avocados and increasing the length of the shipping season during which Hass avocados may be imported into the United States.

On July 13, 2001, we published in the **Federal Register** (64 FR 36891-36905, Docket No. 00-003-2) a proposal to expand the area of distribution for Hass avocados imported from Mexico to include Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming. We also proposed to lengthen the Mexican Hass avocado shipping season by 2 months, to include March and April. We proposed this action in response to the Mexican Government's request and after determining that expanding the current Mexican Hass avocado import program would present a negligible risk of

introducing plant pests into the United States.

Note: Under the Plant Protection Act (7 U.S.C. 7701-7772), The Secretary's decision as to whether it is necessary to prohibit or restrict the importation of plant products is contingent upon her determination that such a prohibition or such restrictions are necessary to prevent the introduction of plant pests into the United States. The Plant Protection Act does not require that the Secretary's decision be based on a numerical or quantitative measurement of risk. In our proposed rule, we described the risk associated with the importation of Hass avocados under the systems approach regulations as being "negligible", "insignificant", or "reduced to a negligible level." We used these terms in their qualitative, descriptive sense; i.e., according to their common usage. In this final rule we use only the term "negligible" for consistency.

On July 27, 2001, we published a notice of public hearings in the **Federal Register** (66 FR 39121, Docket No. 00-003-3) that detailed the dates, times, and locations of four public hearings regarding the July 2001 proposed rule.

We solicited comments concerning our proposal for 60 days ending September 11, 2001. Because APHIS's main office in the Washington, D.C., area closed early and unexpectedly because of the attack on the nearby Pentagon on September 11, 2001, we accepted and considered any comments received by September 12, 2001. We received 71 comments by that date, including 35 comments made at the four public hearings. The comments were from officials of State departments of agriculture, officials of foreign governments, Members of Congress, scientists, representatives of associations such as farm bureaus, marketing associations, consumer groups, and trade associations, and growers, packers, and shippers of avocados. Thirty-seven of the commenters generally supported the rule, and 34 opposed it. The issues raised in the comments are discussed below, by topic.

On October 12, 2001, APHIS received a petition from the California Avocado Commission requesting that the agency suspend further administrative steps related to this action until, among other things, APHIS conducts, publishes, and makes available for public comment additional risk information that complies with *Harlan Land Co. et al. v. USDA, et al.*, a recent court decision related to the importation of citrus from Argentina. The plaintiffs in that case are four California citrus growers and a coalition of California citrus growers. In *Harlan Land*, the court ruled that APHIS exceeded its authority under the Plant

Quarantine Act to permit the importation of Argentine citrus because the agency did not define "negligible risk." We are denying the California Avocado Commission's petition and we do not agree that the *Harlan Land* decision is applicable to the Mexican Hass avocado rulemaking. We disagree with much of the *Harlan Land* decision and believe that it was predicated on the unique facts of that case and should, therefore, be limited to the Argentine citrus regulations that were at issue in that litigation.

Section 7 of the Plant Quarantine Act (7 U.S.C. 160) and section 412 of the new Plant Protection Act (7 U.S.C. 7712) do not require that the Secretary set a numerical threshold of risk at which the Secretary must permit or forbid importation; rather, Congress entrusted to the Secretary's discretion the decision, regardless of any numerical limitation to permit or forbid importation. Nowhere in section 160 or 412 is the Secretary required to make a finding of negligible risk. Further, sections 160 and 412 do not set forth specific factors that the Secretary must consider in making her decision. A numerical threshold would eliminate the Secretary's ability to exercise her Congressionally delegated discretion under the Plant Protection Act.

Status of Avocados as a Host for Fruit Flies

Comment: Does APHIS consider Hass avocados to be a host for *Anastrepha* spp. fruit flies? Fruit flies are not known to infest Hass avocados under normal growing conditions, and no historical evidence exists that these pests attack Hass avocados under natural conditions, according to APHIS's 1995 Risk Management Analysis.

Response: APHIS considers Hass avocados to be a possible non-host, or, at best, a poor host, for *Anastrepha* spp. fruit flies. No available scientific research has conclusively proven that (1) Hass avocados are a host for *Anastrepha* fruit flies under field conditions, or (2) that Hass avocados are not a host for *Anastrepha* fruit flies under field conditions. However, we are unaware of any reported detections of *Anastrepha* fruit flies infesting Hass avocados under field conditions. Some research using ripe fruit has shown that *Anastrepha* fruit flies can infest Hass avocados under forced laboratory conditions, but no research has shown that Hass avocados can be infested under natural conditions in the field.

Comment: In laboratory tests aimed at ascertaining the susceptibility of several avocado varieties grown in California to infestation by the Mexican fruit fly

(*Anastrepha ludens*), cultivars Anaheim and Hass proved uninfested while Nabal, Ryan, Fuerte, Zutano, Puebla, and several other unnamed varieties were infested under the highly artificial conditions of the study.

Response: APHIS believes that the research mentioned above and other scientific evidence show that Hass avocados are resistant to infestation by *Anastrepha* spp. fruit flies. However, we are not certain to what degree they are resistant. As stated above, APHIS considers Hass avocados to be a possible non-host, or, at best, a poor host, for *Anastrepha* spp. fruit flies.

Comment: One reason why fruit flies may lay eggs in Hass avocados is likely a result of "egg load." Flies may lay eggs in avocados simply because they have built up an excess of eggs and need to release some. For lack of a better available host, they choose avocados, just as they might choose plastic wrap or wood, under forced conditions.

Response: APHIS feels the commenter's supposition is entirely possible, since it is well known that fruit flies will lay eggs wherever they can if a preferred host is not available.

Comment: No research exists to verify with certainty that Hass variety avocados are a host for *Anastrepha* spp. fruit flies. There is no evidence showing that Hass avocados have been infested with *Anastrepha* spp. under field conditions. *Anastrepha* fruit flies may be present in avocado orchards not because they are seeking avocados as hosts, but because the groves provide a good microclimate for the flies. Almost all flies are captured on the periphery of avocado groves, and most likely enter and leave due to lack of preferred host material, and it is likely that fruit flies do not breed in commercial avocado orchards. Therefore, fruit flies should not be considered a pest of Hass avocados, because they do not cause any economic damage to commercially grown fruit.

Response: As stated above, APHIS agrees that no research or evidence exists that proves that Hass avocados are hosts for *Anastrepha* spp. under field conditions. Until such research is completed, APHIS will continue to consider Hass avocados hosts for fruit flies, albeit poor hosts.

Comment: The underlying assumption of the regulations is that avocados are poor hosts for the Mexican fruit fly. We do not know that this is truly the case. We need a better understanding of the true host status of the Hass avocado for Mexican fruit fly. As was shown with Sharwil avocados in Hawaii, a presumed non-host can

become a good host if conditions are correct.

Response: As stated above, the host status of Hass avocados for *Anastrepha* spp. fruit flies has not yet been clearly defined, and until proven otherwise, APHIS will continue to consider Hass avocados as poor hosts for *Anastrepha* spp. fruit flies. However, while there is not sufficient research available to confirm that Hass avocados are not hosts of *Anastrepha* spp. fruit flies, no such fruit flies have ever been detected and reported in Hass avocados growing under field conditions.

Comment: What role do decreasing seven carbon sugars in the peel and flesh of the fruit play in host resistance? What about changes in fatty acid composition? What about barrier infestation of the fruit and the peel? We know that the fruit skin thins considerably as it hangs on the tree.

Response: Research aimed at determining the host status of Hass avocados has not shown the physiological reason why they appear to be resistant to fruit flies. Field cage tests previously conducted in Mexico were designed to test commercial avocados for resistance to fruit flies. The field cage tests found that, whatever their physiological condition, the fruits were resistant to fruit flies. (The nature of this resistance was not determined.)

Regarding the thinning of the skin: In the field cage tests, fruit flies were able to penetrate the skin and lay eggs in the fruit, but the eggs failed to develop. In laboratory tests that involved fruit subjected to infestation immediately after harvest, fruit flies were also able to penetrate the skin and lay eggs in the fruit, but eggs failed to develop. Only when fruit was harvested, held for several days, and then subjected to oviposition under forced conditions were the eggs able to develop into larvae.

Comment: APHIS relies on the total number of fruit cut and inspected without detection of fruit fly larvae during the operation of the Mexican Hass avocado import program as evidence of the poor host status of Hass avocados.

Response: APHIS believes that the number of fruit cut and inspected without detection of fruit fly larvae during the operation of the Mexican Hass avocado import program provides evidence that the systems approach is working as designed and is effectively mitigating the risk of pest introduction into the United States. As stated in the proposed rule, nearly 5.5 million fruit have been cut and inspected in orchards, in packinghouses, and at the border, and none were found infested

with target pests. While it may be tempting to infer that, based on the number of fruit cut without detection of fruit fly larvae, Hass avocados growing in commercial groves in Michoacan, Mexico, are not hosts to *Anastrepha spp.* fruit flies, no scientific evidence is available that conclusively supports or denies that conclusion.

Comment: An Agricultural Research Service (ARS) review of a research report from Mexico dated July 21, 1994, concluded, "it appears that Hass avocado, while on the tree, may be resistant to fruit fly development but this needs to be systematically proven before "non-host" status can be demonstrated." At the time, this prompted APHIS to write to Sanidad Vegetal: "Because of their high susceptibility in the laboratory, we cannot yet consider Hass avocados as being nonhosts under field conditions without research to identify the resistance factors over time and under all ecological conditions." Has this research been done? Regardless, APHIS has apparently changed its position on the issue of the host resistance of Hass avocados. APHIS has emphatically stated, "host resistance is real" based on fruit cutting results generated by the Mexican Avocado Import Program, despite the fact that past research projects have not conclusively established that Hass avocados are physically or chemically resistant to attack by fruit flies. APHIS's position on host resistance lacks substance, flies in the face of scientific principles, and cannot be relied upon as a risk mitigation strategy (it is presently Step Four in APHIS's systems approach).

Response: As stated earlier in this document, APHIS has not changed its position on the issue of host resistance, because no available scientific evidence conclusively proves that Hass avocados that are imported under the conditions of the systems approach are not hosts for fruit flies. APHIS did state in the June 1999 "Review of the Systems Approach for Mexican Avocado" that "the evidence shows that this variety [Hass] is either not a host or a poor *Anastrepha* fruit fly host prior to harvest * * * The field and packinghouse fruit cutting (2,897,926 fruit for both seasons) indicates that the host resistance is real."

We do not believe our use of the word "indicates" represents the "emphatic statement" suggested by the commenter. In fact, that sentence is the only time APHIS has gone on record with such a statement, and the June 1999 Review is not considered a risk assessment document, and does not, by itself, provide any basis for the expansion of

the Mexican Hass avocado import program. As stated earlier in this document, APHIS does believe that the number of fruit cut and inspected without detection of fruit fly larvae during the operation of the Mexican Hass avocado import program provides evidence that the systems approach is working as designed and is effectively mitigating the risk of pest introduction into the United States.

Enforcement and Outreach

Comment: Who is going to enforce the rules and regulations that APHIS has proposed? Is enforcement being paid for by U.S. taxpayers? Is it going to be self-policing?

Response: APHIS's International Services (IS) maintains a presence in the avocado production areas in Michoacan. IS has an inspector stationed in Michoacan year-round to ensure that APHIS regulations and the conditions of the program workplan are being complied with in approved orchards and packinghouses. APHIS also employs seasonal inspectors who monitor compliance with the regulations during the orchard certification process and the avocado shipping season. These enforcement activities are paid for out of a trust fund account that is funded by an association of Mexican avocado growers in accordance with the regulations in § 319.56-2ff(b).

As has been the case for the first 4 years of the program, the regulations will be enforced in the United States by APHIS Plant Protection and Quarantine (PPQ) officers stationed at ports and offices in both approved and nonapproved States. Additional services will be provided by APHIS-PPQ's Smuggling Interdiction and Trade Compliance (SITC) program, which:

- Conducts smuggling interdiction efforts at air, land, and sea ports of entry.
- Carries out domestic market surveys for the presence of prohibited products.
- Conducts transit survey and smuggling interdiction efforts at truck weigh stations inside the country.
- Provides education and outreach to importers, market owners, transportation companies, retailers, and the public regarding regulatory compliance.
- Provides liaison and cooperative efforts with State departments of agriculture and other Federal agencies such as the U.S. Customs Service, U.S. Fish and Wildlife Service, U.S. Food and Drug Administration, and U.S. Department of Agriculture's (USDA's) Food Safety and Inspection Service.

- Works closely with APHIS's Investigative and Enforcement Services (IES) and USDA's Office of the Inspector General and Office of General Counsel to investigate potential regulatory violations and prosecute violators to the full extent of the law.

- Gathers information to identify and close down smuggling pathways for prohibited agricultural products.

More information on the SITC program is available on the APHIS website at: <http://www.aphis.usda.gov/ppq/trade/>. PPQ and SITC enforcement activities are funded by Agricultural Quarantine and Inspection (AQI) user fees paid by persons who import commodities, including avocados, into the United States.

Comment: What additional resources are going to be available to enforce the regulations, given the expansion of the program? There is legitimate concern that the Mexican Hass avocado import program cannot be effectively monitored under the current state of APHIS resources, particularly in the enforcement area. APHIS should review its resources prior to adopting any change to the program.

Response: APHIS has reviewed its resources and believes it has adequate coverage across the United States to ensure compliance with its regulations, including the Mexican Hass avocado import program, as expanded by this rule.

Comment: When avocados are moved into Utah, how is APHIS planning to guard the border to ensure that they do not move westward toward California?

Response: There are no APHIS personnel who physically guard borders between U.S. States. However, all persons who move or distribute Mexican Hass avocados within the United States must enter into a compliance agreement with APHIS wherein they must acknowledge and agree to observe the regulations that restrict the movement of Mexican Hass avocados to certain States. Furthermore, persons who obtain permits to import Mexican Hass avocados may only transfer the avocados to persons who have entered into a compliance agreement with APHIS. Persons who violate these conditions may have their permits or compliance agreements revoked. Violators are also subject to penalties authorized under the Plant Protection Act (7 U.S.C. 7701-7772).

APHIS-PPQ also has enforcement personnel in each U.S. State who are responsible for monitoring compliance with APHIS-PPQ regulations, including the Mexican Hass avocado import program. These personnel review shipping documents at either end of the

shipping process to ensure that Mexican Hass avocados are distributed only to approved States.

Comment: Are the distribution hubs of retail chains that operate in States inside and outside the approved distribution area going to be monitored? If so, by whom? Who will pay for the monitoring?

Response: Distribution hubs of such retail operations will have to enter into the same compliance agreements just described, and will be subject to the same monitoring just described. As stated earlier in this document, monitoring is funded by receipts of AQI user fees paid by persons who import commodities, including avocados, into the United States.

Comment: Will there be an educational outreach effort to educate trucking companies on the restrictions associated with the movement of imported avocados? If so, who will conduct the outreach, and who will pay for it?

Response: APHIS will send letters to various trucking industry organizations and produce marketing organizations notifying them of the change in the regulations. Furthermore, the revised box marking requirement should be helpful in alerting shippers and retailers to the change in the regulations. All of APHIS's educational outreach activities, including outreach activities regarding Mexican Hass avocados, are paid for with funds appropriated by Congress.

Comment: There is an economic incentive for consumers to smuggle fruit into prohibited areas. What kind of outreach is planned to educate the public on the legal ramifications of moving Mexican Hass avocados to nonapproved States? Who will fund the outreach activities?

Response: There will always be some risk that commodities will be smuggled into one area from another area where they cost less. APHIS does not believe that expansion of the Mexican Hass avocado import program will increase the likelihood that smuggling will occur. Further, APHIS has not planned any outreach activities that are directed at consumers because it does not believe that smuggling of Mexican Hass avocados by consumers is a serious problem. Small quantities of Hass avocados that are moved into nonapproved areas do not present a major risk that pests could be introduced into, or become established in, those areas, especially given that Mexican Hass avocados have not been shown to be infested with any pests of concern.

Comment: Controls should continue to be tightened to keep Mexican Hass

avocados from being illegally shipped to Florida and other States with avocado pest host material. One shipment of avocados found in Florida did have scale, which is an actionable pest in Florida.

Response: APHIS is pleased with statistics that suggest there has been over a 99 percent rate of compliance with the limited distribution requirements for shipments of Hass avocados from Mexico. This compliance rate is well within the estimates used for the risk assessment, and therefore, APHIS sees no need to further tighten restrictions on Mexican Hass avocado imports. The scale insect referred to above was not an exotic species that required quarantine action by APHIS.

Comment: Interception statistics suggest that 1 out of every 1,000 shipments of boxes of avocados ends up outside the approved distribution area. Is this an acceptable level of risk?

Response: APHIS does not determine "acceptable levels of risk" for each node or potential risk event. Rather, estimates of the risk that specific events could occur are factored into the overall calculations of risk in the risk assessment. The risk assessment concludes that there is a negligible risk of pest introduction associated with Mexican Hass avocados imported under the various requirements of the systems approach.

Comment: APHIS has been too slow in applying appropriate penalties to U.S. distributors who knowingly divert Mexican Hass avocados to nonapproved States.

Response: APHIS makes every attempt to resolve cases as quickly as possible; however, all alleged violators of APHIS's regulations have rights, are afforded due process, and may request to present their case at a hearing. This process can take time due to the fact that violators often have the right to appeal their cases to higher courts.

Comment: USDA-APHIS does not have a tracking system in place to monitor the movement of avocados to their final destination. Even though boxes of avocados are marked with destination restriction requirements, there is nothing to stop fruit from being repackaged and sent to nonapproved areas. The Florida Department of Agriculture is concerned that there is no mechanism in place to protect it from fraud by avocado shippers, packers, etc.

Response: Shipments of Mexican Hass avocados may only be imported under limited permits granted by APHIS and are tracked to their initial destination in the United States. APHIS inspectors confirm that shipments arrive at their approved destination by reviewing

shipping documents, and monitor shipments from distribution hubs to ensure that avocados are not shipped to nonapproved areas. Shippers of Mexican Hass avocados must retain their shipping records, which are subject to APHIS review.

APHIS believes it is highly unlikely that Mexican Hass avocados would be repackaged and sent to nonapproved areas, especially given that each avocado must be identified with a sticker that bears the Sanidad Vegetal registration number of the packinghouse where they were packed in Mexico. An unscrupulous distributor who wished to illegally transship Mexican avocados would have to pay the costs associated with obtaining a shipment of imported Mexican avocados at wholesale prices from a terminal market in an approved State, moving that shipment to a secure location, unloading the boxes from the truck or container, removing all the avocados from their packing boxes, peeling the sticker from each piece of fruit, perhaps adding a new sticker to each piece of fruit, repacking the fruit in new boxes, loading the boxes back onto the truck or container, and driving the load of avocados across the country to one of the expected high-demand markets (south Florida, Texas, and California), all of which would limit the profitability of such an illegal enterprise. We believe that this limited profit potential, when combined with other factors such as the ready availability of domestic and imported avocados in areas outside the approved States and the fact that persons involved in such illegal transshipment are liable to legal action, incarceration, or fines, makes it unlikely that such "commodity fraud" will take place.

Comment: Since the inception of the Mexican Hass avocado importation program, two avocado pests from Mexico, the avocado thrips (*Oligonychus perseae*) and the Mexican fruit fly (*Anastrepha ludens*) have caused significant damage to the agricultural industry in San Diego County, CA. The thrips were likely introduced into California as a result of illegal shipments of Mexican avocados, despite APHIS's contention that Mexican Hass avocados have not been diverted into California.

Response: To clarify, the scientific name for the avocado thrips is *Scirtothrips perseae*, and the scientific name for the perseae mite is *Oligonychus perseae*. Both of these pests are established in the State of California, and both cause damage to avocado fruit. The avocado thrips was first noticed in California in July 1996, and the perseae mite was first identified in California in

1990. Both pests were introduced into California prior to the beginning of the Mexican Hass avocado import program, and were not introduced into California via Mexican Hass avocados imported under the systems approach regulations. APHIS can only speculate as to how those pests were introduced into California, but believes it is possible that both could have been introduced via propagative material imported from Mexico in violation of APHIS regulations.

The Sequeira, *et al.* study, which provides part of the basis for this final rule, identifies San Diego County as an area at high risk for fruit fly establishment. Given the poor host status of Hass avocados for *Anastrepha* spp. fruit flies, and given the limited distribution requirements of the regulations and all the APHIS enforcement activities that support those regulations, APHIS believes it is highly unlikely that imported Hass avocados from Mexico could serve as a pathway for the introduction of fruit flies into San Diego County. Outbreaks of Mexican fruit fly occurred periodically prior to the inception of the Mexican Hass avocado program. APHIS believes these infestations were likely triggered by small amounts of preferred host material smuggled within legitimate cargo or passenger baggage.

Comment: APHIS's amendment of the regulations to require compliance agreements is appreciated. However, even after the new requirements, California continued to intercept Mexican avocado shipments, mostly at border stations, that were being moved in violation of the limited distribution and travel corridor requirements.

Response: APHIS is unaware of any Hass avocados imported under the systems approach regulations that were intercepted at California border stations. APHIS is aware that in early 1999, several shipments of Mexican avocados intended for transit through the United States and exportation to another country were intercepted at California border stations. These shipments were not associated with the Mexican Hass avocado import program.

Inequity of Treatment Protocols

Comment: In 1999, when APHIS declared a Mexican fruit fly quarantine covering an 81-square-mile area surrounding Fallbrook, CA, after finding two Mexican fruit flies, there was no debate about the host status of Hass avocados. APHIS did not classify Hass avocados as a secondary host, as did Sequeira, *et al.* In California, APHIS required the application of Malathion bait treatments for two life cycles of the

Mexican fruit fly—a period of time covering 4 to 8 months—before Hass avocados could be harvested from groves within the quarantine zone. By contrast, under the regulations, if two fruit flies are detected within a 260-hectare area within the approved Hass avocado export area in Mexico, growers may continue to export fruit to the United States provided that malathion bait treatments are applied every 7 to 10 days. This APHIS policy unfairly favors foreign interests over domestic producers of avocados, and APHIS offers no explanation for this apparent double standard in the proposed rule or any of the supporting documents.

Response: APHIS acknowledges that there are differences in the regulatory procedures for growers to certify the movement of Hass avocados from Mexican fruit fly regulated areas of Mexico and the United States. However, in both cases, the goal of the regulatory procedures is the same: To eliminate the potential for spread of fruit flies. In 1999 in Fallbrook, CA, APHIS quarantined an 81-square-mile area until such time as we could determine that there was not a reproducing fruit fly population in that area. To ship fruit out of the area, growers had to bait treat Hass avocado orchards at 6 to 10 day intervals for two fruit fly life cycles as estimated by the degree day model. Upon completion of bait spray treatments, Hass avocados from the regulated areas could be shipped anywhere in the United States, without any further restriction.

In contrast, Hass avocados grown in approved orchards in Michoacan, Mexico, are always subject to the various conditions employed by the systems approach regulations, which are intended to protect the United States from the introduction of fruit flies and avocado-specific pests. While Hass avocados from Mexico may continue to be shipped to the United States if 2 fruit flies have been found in a 260-hectare area within the growing area, such avocados are still subject to all of the other risk-mitigating conditions of the systems approach. These conditions include, among other things, requirements that Hass avocados only be shipped to certain States during certain months of the year, that they originate in orchards that meet certain sanitation requirements, that they be packed in packinghouses under certain conditions, that the boxes and fruit be specially labeled, that certain numbers of fruit must be cut in orchards, in the packinghouse, and at the border, and that persons handling and shipping avocados enter into compliance agreements with APHIS. U.S. growers within an area under a fruit fly

quarantine are not subject to any restrictions of this type, and may ship Hass avocados to all areas of the United States at any time of year after bait treatments have been completed.

These issues aside, APHIS understands that avocado growers in California would like to be able to harvest and ship their fruit during a fruit fly quarantine in the event that one was to be declared in a domestic growing area. APHIS is currently evaluating protocols that would enable such movement.

Extension of Shipping Season and Expansion of Approved Distribution Area

Comment: The regulations should list States where the distribution of Mexican Hass avocados is prohibited rather than States where such distribution is allowed.

Response: APHIS agrees that the box markings for imported Mexican avocados should be revised. Therefore, in this final rule we are revising the box marking provisions to require that boxes of Hass avocados imported from Mexico be clearly marked with the statement "Not for distribution in AL, AK, AZ, AR, CA, FL, GA, HI, LA, MS, NV, NM, NC, OK, OR, SC, TN, TX, WA, Puerto Rico, or any other U.S. Territory." The requirements that avocados be packed in clean, new boxes clearly marked with the identity of the grower, packinghouse, and exporter are not affected by this change. Given that the number of approved States now exceeds the number of nonapproved States, this change will reduce the amount of text necessary for the box markings, making them easier to read.

Comment: During the first year of the Mexican Hass avocado import program, six States were believed to have received illegal avocado shipments. To help protect the large California avocado industry from infestation, States such as Kansas and Utah should be removed from consideration. Utah is 200 miles from California, and Kansas is just across the Oklahoma panhandle from Texas.

Response: APHIS is confident that monitoring activities conducted by PPQ, which are described in detail earlier in this document, are adequate to ensure that Hass avocados from Mexico are not diverted into nonapproved States. APHIS does, however, wish to restate that the risk estimates assume that, despite the regulations and APHIS's enforcement activities, a certain number of boxes of avocados might be diverted outside the approved distribution area. These risk estimates are factored into the overall calculations of risk in the

risk assessment, which provides that there is a negligible risk of pest introduction associated with the importation of Mexican Hass avocados. During the first 4 years of the program, 3881 boxes of fruit were diverted outside the approved distribution area. This number is substantially less than the number APHIS assumed might be diverted in calculating the overall pest risk associated with the importation of avocados. To change the overall risk estimate, the amount of diversion would have to be approximately 50 times the current level of diversion.

Comment: APHIS-PPQ's industry alert dated October 2000 states that moving or shipping Mexican Hass avocados to other States poses a risk of introducing pests that could cause millions of dollars of damage to U.S. crops. Why does APHIS's proposed rule state the opposite of what was reported in the industry alert?

Response: The October 2000 Industry Alert was based on information available to us at the time it was prepared. As stated in our proposed rule, APHIS proposed to expand the Mexican Hass avocado import program based on:

- Risk assessment documents on which the original import program was based, but that still provide a basis for expansion of the program.
- A study conducted by the North American Plant Protection Organization's (NAPPO's) Pest Risk Assessment Panel (referred to elsewhere in this document as "Sequeira, *et al.*") that provides evidence that *Anastrepha* fruit flies could not become established in the States proposed for expansion.
- Four shipping seasons (1997–2001) worth of shipping and inspection data and 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 Mexico's request that we expand the Mexican Hass avocado import program is documented in APHIS's "Information Memo for the Record" (April 30, 2001).

Comment: The Department appears to be sweeping aside one of the critical components to the systems approach, namely limiting the season of shipment. Under the proposal, fruit and pests can be shipped into the United States during times (April and May) when there certainly is host material present in the receiving States. Consequently, the rule should be appropriately modified to delete April as a shipping period. If the Department is intent on expanding the time period to cover a 6-month shipping window, then a possible approach

would be to start the program on October 15 and end it on April 15.

Response: APHIS has reviewed the risk assessment documents on which this rule is based, and finds that they support the commenter's suggestion. We have reviewed anecdotal evidence regarding the marketing patterns of Mexican Hass avocados and have found that Hass avocados remain in the marketplace for 2 to 4 weeks after importation. Therefore, avocados imported on April 30 could be in the marketplace until late May, when fruit fly host material would be beginning to become available in some approved States. To further reduce the risk that fruit flies, if imported with Mexican Hass avocados, could find suitable host material in approved States, we are revising the dates that begin and end the shipping season. As suggested by the commenter, the shipping season will run from October 15 through April 15. This change will help to ensure that fruit flies, in the highly unlikely event that they are present in imported Hass avocados, are even less likely to be imported into areas with suitable host material that could support their survival.

As stated in our proposed rule, the numbers of fruit flies trapped in approved municipalities in Michoacan are higher in October than in April. However, climatic conditions in the States proposed for expansion are less conducive to fruit fly survival in late October than in mid- to late May, when imported avocados could still be in the marketplace in the United States. Climatic conditions in October in the approved distribution area are such that even if fruit flies were present in shipments of avocados, the flies would find little or no host material on which to survive. Further, even if host material were present and conditions were suitable for fruit fly survival in late October, conditions in November would not be suitable for fruit fly survival.

Comment: Although trapping data indicate that fruit fly population levels in Michoacan are lower between the months of November and April, captures in May rise precipitously. For adults to be captured in May, ovipositing in host material had to occur in late March or early April, depending upon ambient weather conditions. Generally, temperatures between 20 and 30 °C considered optimal for the development of *Anastrepha* spp. fruit flies. According to the Joint Agricultural Weather Facility, operated by the World Agricultural Outlook Board of the USDA and the National Oceanic and Atmospheric Administration (NOAA) of the U.S.

Department of Commerce, average temperatures in those municipalities in Michoacan, Mexico, approved for the export of Hass avocados were within this range between February 1 and April 30, 2001. This means that fruit fly eggs and larvae were present in host material in or around avocado groves at the time of the proposed harvest of Hass avocados for shipment to the United States.

Response: As stated elsewhere in this document, APHIS has acknowledged that *Anastrepha* spp. fruit flies are present in Michoacan, which is why the systems approach regulations include safeguards to prevent the introduction of those pests. The requirements, such as surveillance trapping, increased trapping in response to a single fruit fly detection, Malathion bait treatments, covering of harvested avocados, fly-proof screens on packinghouses, and inspections, work together with the poor host status of Hass avocado fruit growing in commercial orchards in Michoacan to mitigate the risk posed by *Anastrepha* spp. fruit flies.

Comment: To allow Hass avocados to pass through Florida for an extended period when the invasive pests associated with avocados are more prevalent would create a hardship for the Florida avocado industry and the larger Florida agricultural industry. Although identified pests of avocados would not likely become established in the approved States, they could become established in Florida. With the potential for transshipment, that is a distinct possibility.

Response: Avocados imported under the systems approach regulations contained in § 319.56–2ff are not eligible for movement into or through Florida at any time.

Pest Detection

Comment: Without knowing the methodology used for fruit cutting and other visual survey activities, there is no way for reviewers to draw conclusions from the survey or other interpretive data provided.

Response: There is no manual on methods for fruit cutting and other visual survey activities, per se. However, there is some discussion of such methodologies in the 1995 Risk Management Analysis and the workplan for the Mexican Hass avocado import program. Again, APHIS is confident that Mexican Hass avocados are properly cut and inspected in orchards, at packinghouses, and at the port of first arrival in the United States.

Comment: The biology of potentially serious pests like thrips makes detection very difficult. Thrips eggs are extremely

small and are usually laid within the tissues of leaves or skin of fruit. The number of eggs laid within individual leaves and fruit in orchards infested with the avocado thrips in California can easily exceed 20. Plant material entering the United States, either legally or illegally, with this number of viable eggs provides a good-sized cohort that could establish a reproducing population in a permissive environment. Further, frequent introductions of small numbers of pests ultimately could lead to establishment when founding populations enter a permissive environment.

Response: APHIS is confident that infestations of thrips in Hass avocados can be detected during inspections required under the systems approach, including inspections at the port of first arrival in the United States. Available literature suggests that most thrips feed on, and lay eggs in, other parts of plants besides fruit, and therefore, APHIS does not generally consider fruit a likely pathway for thrips. Furthermore, the lack of interceptions of thrips of quarantine significance in commercial shipments of avocados suggests that imported avocado fruits are not a good pathway into the United States for such pests.

Comment: In the 2001 trip report, Dr. Cervantes states that “the methods used for detecting pests that have been proposed in the USDA-SAGAR workplan, if they are followed as specified, are adequate to detect the presence of the seed moth.” What about the other pests?

Response: Dr. Luis M. Cervantes Peredo was asked to review only the avocado seed moth detection activities associated with the Mexican Hass avocado import program. Dr. Cervantes is an expert on the avocado seed moth, and in his report found that the various pest detection measures used in the program are adequate to detect the presence of the avocado seed moth in approved avocado groves.

Comment: Is there a prescribed protocol for certifying or otherwise validating laboratory standards and/or detection programs in the areas of origin? Who ensures that such protocols are enacted? Are there penalties for laboratories or detection facilities and programs that do not enact or conform to the prescribed protocols?

Response: We are unsure of what the commenter means by “laboratory standards,” as the program involves no laboratories, per se. Regardless, as stated earlier in this document, APHIS’s International Services (IS) maintains a presence in the avocado production areas in Michoacan. IS has an inspector stationed in Michoacan year-round to ensure that APHIS regulations and the conditions of the program workplan are being complied with in approved orchards and packinghouses. APHIS also employs seasonal inspectors who monitor compliance with the regulations during the avocado shipping seasons. Orchards that do not meet the criteria outlined in the regulations (including trapping, fruit cutting, orchard sanitation, and other requirements) are removed from the program. Essentially there should be

minimal concern that APHIS standards are being met in Mexico because APHIS monitors all aspects of the import program.

Fruit Cutting

Comment: A fruit fly egg is about 1.2 millimeters in length in the field and in the packinghouse where 99 percent of all fruit cutting for the program takes place. Weevil larvae feed just underneath the skin of avocado near the stem end and, unless fruit are examined closely, larvae would not be detected. Fruit that are cut should be examined for eggs of fruit flies, weevils, and thrips using hand lenses or dissecting microscopes. Non-detection under the current fruit cutting procedures does not indicate non-infestation.

Response: APHIS inspectors are allowed to use their discretion in selecting a method of examination of imported Hass avocados. Each inspector has a hand lens that he or she may use if needed to aid in the detection of pests in Hass avocados. APHIS is aware that there is a remote possibility that pests could infest fruit and escape detection during fruit cutting. However, fruit cutting represents only one element of the systems approach, which uses a series of overlapping, redundant safeguards to mitigate the risk of pest infestation. In fact, Table 3 in the risk management analysis for the systems approach shows that fruit cutting is one of the least effective risk mitigating tools used in the systems approach. For convenience, the table is reproduced below.

TABLE 3.—SYSTEMS APPROACH: MEXICAN AVOCADO

Risk mitigation measures	Reduction of potential pest risk					
	Fruit flies: <i>Anastrepha</i> spp.	Small avo- cado seed weevils: <i>Conotrachelis</i> spp.	Avocado stem weevil: <i>Copturus</i> <i>aguacatae</i>	Large avo- cado seed weevil: <i>Heilipus lauri</i>	Avocado seed moth: <i>Stenoma</i> <i>catenifer</i>	Hitchhikers and other pests
Field surveys	40% to 60%	95% to 99%	80% to 95%	95% to 99%	95% to 99%	40% to 75%
Trapping and field treatments	55% to 75%	0	0	0	0	3% to 20%
Field sanitation	75% to 95%	15% to 35%	70% to 90%	15% to 35%	15% to 35%	20% to 40%
Host resistance	95% to 99.9%	0	0	0	0	0
Post-harvest safeguards	60% to 90%	0	0	0	0	40% to 60%
Winter shipping only	60% to 90%	0	0	0	0	50% to 75%
Packinghouse inspection and fruit cutting	25% to 40%	50% to 75%	40% to 60%	50% to 75%	50% to 75%	30% to 50%
Port-of-arrival inspection	50% to 70%	50% to 70%	50% to 70%	50% to 75%	50% to 75%	60% to 80%
Limited U.S. distribution	95% to 99%	95% to 99%	90% to 99%	95% to 99%	95% to 99%	75% to 95%

As shown in the table, for each type of pest, there are at least two other mitigating measures that are believed to be more effective in reducing risk of infestation of avocados than fruit cutting. The most significant of these

mitigating measures is the limited distribution measure, which provides that, even in the event that infested fruit escape detection at the port of first arrival, they are only eligible for importation into areas with a lack of

suitable host material and climatic conditions that would inhibit their survival.

Comment: In the field, fruit is cut in half or quartered, is inspected for seed damage or tunneling, and is then

discarded. In the packinghouse, fruit is cut in half and given a cursory glance and then brushed off the cutting table without examination. APHIS must work closely with Sanidad Vegetal to develop formal, documented methods for cutting fruit in the field, at packinghouses, and at the border. The objective of fruit cutting in the field should be detection of stem weevils, seed weevils, and the seed moth. Each inspector should be thoroughly trained in proper fruit cutting technique, and should be equipped with a hand lens.

Response: In the past, APHIS observed improper fruit cutting techniques being employed at packinghouses, and took corrective action. We are confident that inspections and fruit cutting in the field and at the packinghouses are being conducted properly. APHIS inspectors are present any time that fruit is cut in a packinghouse in Mexico, and are trained to detect all of the pests of concern for Hass avocados. Each APHIS inspector has a hand lens available if its use is necessary, and the objective of fruit cutting is always detection of any and all pests. Though fruit cutting and inspection are not as effective for detecting fruit flies as they are for detecting stem weevils, seed weevils, and the seed moth, APHIS inspectors look for all pests during these procedures.

Comment: If the fruit cutting technique is not standardized, and is not accompanied by proper detailed inspection of fruit, including use of hand lenses or microscopes, then the data generated regarding the number of uninfested cut fruit are meaningless and cannot serve as a basis to support a change in regulatory requirements.

Response: As stated earlier in this document, we believe fruit cutting as it is currently practiced in the field and at packinghouses is adequate to detect pests in Hass avocado fruit.

Furthermore, fruit cutting data suggest that the Mexican Hass avocado import program is working as designed.

We did not propose to expand the program simply because of fruit cutting data. Rather, as stated in our proposed rule and elsewhere in this document, we proposed to expand the program because risk assessment documents and 4 seasons worth of shipping, inspection, and trapping data support expanding the rule. Indeed, fruit cutting data suggest that imported avocados are not infested with pests, but the findings of the Sequeira, *et al.* study suggest that even if avocados were infested with fruit flies, those flies would not survive in the approved distribution areas.

Comment: APHIS has acknowledged that fruit cutting is not intended as a method for detecting fruit fly eggs or larvae. This is evident from the description of the procedure itself in the Work Plan, which states that "all the fruit will be cut open to detect the presence of weevil eggs or larvae".

Response: APHIS has made a policy of not using inspection (and in this case, fruit cutting) as a means of mitigating the risk posed by fruit flies. As shown in Table 3 of the Risk Management Analysis (reprinted earlier in this document), packinghouse inspection and fruit cutting provide only a 25 to 40 percent reduction in the risk posed by fruit flies, while providing a 50 to 75 percent reduction in the risk posed by seed weevils and a 40 to 60 percent reduction in the risk posed by the avocado stem weevil. Despite this, we do still inspect fruit for all pests.

Comment: Fruit cutting in the field should be supported by mandatory cutting of culled fruit in the packinghouse from each lot per day, in addition to cutting samples from packed fruit prior to shipping.

Response: Under the regulations, 300 fruit per shipment must be cut at the packinghouse prior to culling and packaging. No cutting is done after culling, though fruit that would have been culled are part of the cutting sample.

Comment: Fruit cutting should be based on a percentage of fruit at each inspection for each lot per pack date, not a set number of fruit per lot. Quantities of fruit per lot can vary considerably, with the possibility that large lots could be undersampled. As an example, a minimum of 1 percent of the boxes in each lot in the shipment should be visually inspected and 5 percent of the fruit within those boxes should be cut and carefully inspected for the presence of internal feeders.

Response: Fruit cutting is based on a percentage of fruit per shipment. As stated above, under the regulations, 300 fruit must be cut and inspected per shipment to the packinghouse. A shipment of avocados is almost always the total amount that can fit in a standard shipping container. APHIS believes that such shipments, depending on the size of the fruit and the number of field boxes, can range in number between 1,000 and 4,000 avocados. Hypergeometric tables indicate that the sample size needed to reach the 95 percent confidence level of detecting a 1 percent infestation in these shipments varies between 258 and 288 fruit cut per shipment, assuming a maximum number of 4,000 avocados per shipment. Therefore, we set the

sample size at 300 fruit, and believe this sample size is sufficient to provide a high level of confidence that infested fruit will be detected, if present.

Comment: Paragraph 4.4 under the Packinghouse section of the 1999 workplan requires that fruits sampled at the packinghouse are to be cut into slices to inspect for fruit flies, seed pests, and stem weevils, but the 2001 trip report and program review pictures provided show a fruit cutting procedure that does not appear consistent with the work plan requirements.

Response: It is difficult to determine from the pictures provided in the 2001 trip report whether the fruit have been sliced properly to detect stem weevils. Since such slices are thin, as evidenced in G.L. Kreitner's photo essay on damage caused by weevils in avocado fruit, and those slices are not readily discernable from the picture. Nonetheless, the APHIS personnel who were present during the pictured fruit cutting have assured APHIS that cutting at the top of avocados near the stem end for stem weevils was indeed performed. Additionally, the pictures do show evidence of deep cuts necessary to examine for seed damage cause by seed weevils and the seed moth.

Comment: If fruit cutting is targeting seed-infesting insect larvae, yet the agency is using the same data to advance a finding of no fruit fly larvae, that conclusion should be a qualified one.

Response: While absence of fruit fly detections from fruit cutting does not definitively prove absence of infestation, we do believe it provides some evidence that the Mexican Hass avocado import program is working as designed, as we have previously stated.

Pest Surveys

Comment: APHIS claims that the starting point in the risk equation for fruit flies is virtually zero, and that the number of fruit fly captures in traps set out in Mexican avocado orchards from November through April is insignificant.

Response: We have acknowledged that *Anastrepha* spp. fruit flies are present in Michoacan, which is why the regulations set forth safeguards to prevent the introduction of those pests. The requirements, such as surveillance trapping, increased trapping in response to a single fruit fly detection, Malathion bait treatments, covering of harvested avocados, fly-proof screens on packinghouses, and inspections, work together with the poor host status of Hass avocado fruit to mitigate the risk posed by *Anastrepha* spp. fruit flies.

Comment: Single digit fruit fly captures in Mexico from November through April are not believable. There is no doubt that fly populations are on the rise in April in Mexican avocado groves, based on the dozens of adult flies captured in May. It would only take a warm spring—a 2-week shift in seasonal weather patterns—to precipitate explosive growth in fruit fly populations.

Response: We have confidence that fruit fly trapping in Mexico is being conducted properly, based on observations by APHIS inspectors. From 1997 to 2000, a total of 68 fruit flies were trapped during the month of May in orchards certified for export to the United States.

These data do suggest that fruit flies are being trapped in higher numbers in May than in November through April. However, as stated earlier in this document, the approved shipping season for Mexican Hass avocados will run from October 15 through April 15. We feel that this change will reduce the risk that fruit flies, in the highly unlikely event that they are present in imported Mexican Hass avocados, could be introduced into an area of the United States where adequate host material is available (mid- to late May in approved areas). Furthermore, there still remains no evidence to conclusively prove that the fruit flies in approved Mexican Hass avocado orchards are populating in those orchards and/or using Hass avocados as hosts.

Comment: Four years of trapping results provide no guarantee that future fruit fly population levels will remain low, particularly during the month of April, because populations of flies in commercial orchards can exhibit strong fluctuations from year to year.

Response: As stated in more detail earlier in this document, we are revising the approved shipping season for Hass avocados to run from October 15 through April 15. We believe that this change will further reduce the possibility that fruit flies, in the highly unlikely event that they are present in imported Hass avocados, could find suitable conditions and host material to support their survival in the approved distribution area.

Comment: APHIS should replace the highly inefficient McPhail traps and liquid protein baits used in the Mexican Hass avocado import program with newly developed synthetic lure and cylindrical traps. Alternatively, the Department should consider using Nulure as an attractant in McPhail traps deployed in Mexican avocado groves until new technology is adopted by Mexico.

Response: APHIS is aware of the availability of new traps that use Nulure as an attractant. APHIS is currently evaluating these traps and may elect to require their use in the Mexican Hass avocado import program at a later date.

Comment: Fruit fly trap placement in Mexican growing areas is haphazard with respect to height and exposure to sunlight. Research has shown that the preferred placement of traps is within the tree canopy where traps are shaded. Industry observers have seen traps being inappropriately washed out with soapy water. They have seen trappers barely examine trapped specimens to determine if target pests were present. Servicing of traps must be conscientious, both with respect to cleaning and rebaiting of traps as well as detection and identification of target species.

Response: Trapping is conducted in Michoacan by county-level officials of Mexico's Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación (SAGARPA). These persons are trained by SAGARPA, and are monitored by APHIS-IS personnel. APHIS inspectors stationed in Mexico monitor the placement and servicing of traps; if an inspector determines that trapping is not being conducted properly, he or she orders corrective action.

Comment: A weak or ineffective attractant, a misplaced trap, or a target species that was captured but undetected could significantly skew reported fruit fly trapping results. Data presented by APHIS do not accurately represent actual fruit fly activity levels in Mexican avocado orchards throughout the year, and the risk of infestation is significantly higher than levels calculated by APHIS.

Response: APHIS must rely on trapping data as the only evidence of fruit fly activity in Michoacan, given the absence of fruit fly detections in the avocados themselves. APHIS is confident that traps in Michoacan are placed and tended similarly to traps placed in U.S. fruit fly host growing areas, and, based on its own inspections of the growing areas in Mexico, has no reason to suspect that the data have been corrupted by improper trapping techniques.

Comment: Proper pest surveys of the avocado export area in Mexico still have not been done, particularly in the absence of broad-spectrum pesticide use that maintain pest species at relatively low levels such that it is almost impossible to predict what other pest problems, both arthropods and diseases, might arise. For instance, prior to its discovery in California, the avocado

thrips was a species new to science. One wonders how this pest could be present in avocados in Mexico without being known as a pest in the scientific literature or having been described taxonomically.

Response: As stated in the proposed rule, 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. Furthermore, APHIS believes that thrips, which are external feeders, can be readily detected by inspection. We do not require treatment or other mitigations for thrips on most fruits for this reason.

Comment: In 1997, APHIS surveys detected over 2,100 stem weevils in Mexican avocado groves. There is no indication that these numbers have decreased in the 4 years since. Given that APHIS conducts surveys for stem weevils at the wrong time of year, the numbers could be even higher.

Response: APHIS has acknowledged that stem weevils are present in the State of Michoacan, and there is no existing program in Mexico that is intended to reduce their numbers. However, the systems approach is designed to mitigate the risk that stem weevils could infest imported Hass avocado fruit.

Regarding inspections for stem weevils, the Junta Local de Sanidad Vegetal (JLSV) conducts monthly inspections of orchards certified under the Mexican export program.¹ These inspections include inspections for stem weevils. In addition, the Director General de Sanidad Vegetal (DGSV) conducts one stem weevil survey per year (usually in the spring), and APHIS and DGSV conduct a joint survey in the fall prior to orchard certification. If stem weevils are detected during any of these surveys (including the monthly inspections by JLSV), those orchards are dropped from the Hass avocado export program.

Further, even in the event that imported Hass avocados are infested with stem weevils upon reaching their destination in the United States, there is a minimal chance that stem weevils could find suitable host material on which to survive and establish themselves, given that they are believed to be avocado-specific pests. The only U.S. States that commercially grow avocados are Florida, Texas, California,

¹ Under the regulations, orchards must be part of Mexico's export certification program, which is administered by SAGARPA. The monthly inspections by JLSV are required under the Mexican export program, not under APHIS regulations.

and Hawaii, none of which are approved for distribution of Mexican Hass avocados.

Comment: In 1998, 19 percent of wild/backyard orchards in Uruapan were found to harbor stem weevils. Two years later, APHIS's surveys indicated that 91 percent of wild/backyard sites were infested. No explanation is provided for this dramatic increase in stem weevil detections, but it is evident that populations of these insects remain unabated in the municipalities approved for export to the United States.

Response: Again, APHIS is well aware that stem weevils are present in the State of Michoacan. However, as explained in more detail above, we believe that there is a negligible risk that Mexican Hass avocados imported under the systems approach would introduce plant pests, including stem weevils, into the United States.

Comment: The timing of pest surveys by DGSV is a function of when a grower first petitions JLSV to participate in the export program and, later, the workload at DGSV. A review of a file for a grove eligible to export avocados to the United States shows that the grower initially signed up with the JLSV on November 13, 1997. Following the initial inspection and monthly grove visits by JLSV, DGSV conducted fruit, soil, and foliage sampling to pre-certify the grove for export to the United States. The DGSV surveys were conducted on March 3, 1999, and January 5, 2000. Neither survey was done at a time at which adult avocado pests were most likely to be present. APHIS's statement that surveys by DGSV are made "in the spring" simply is not true. Other grower records indicate that DGSV survey dates are random, and that they are most likely dictated by convenience, not pest biology. Based on this information, the reported number of pests as determined by APHIS and DGSV surveys is artificially low, and not representative of the risks posed by these injurious insects. APHIS should formalize an appropriate schedule for the survey of Mexican avocado groves to ensure that survey activities are conducted when adult stages of the pests of concern are most likely to be present. APHIS should develop this schedule jointly with DGSV and require the agency to adhere to the schedule by agreement under the work plan. Failure to adhere to the schedule should result in the non-certification of orchards until such time as APHIS is able to conduct survey activities with its own personnel.

Response: APHIS believes that the records submitted by the commenter do not represent the complete file for that

orchard. APHIS records show that the orchard in question was also surveyed for stem weevils and seed weevils on June 15, 1999, and June 21, 2000, when adult weevils would be likely to be present in orchards. We continue to believe that orchards in Mexico that export Hass avocados to the United States are properly surveyed for these pests at an appropriate time of year, and see no reason to develop a set schedule for surveys in the regulations or the workplan for the Mexican Hass avocado import program.

Inspection at the Border

Comment: Cutting and inspection of only 64,560 fruit out of a total of 160,108,800 imported avocados at point of entry (0.04 percent) does not represent a valid inspection and detection program. Rather it implies that phytosanitary inspections at the border are simply window dressing and potential or possible detections are of no concern.

Response: There are several other pest detection elements involved in the systems approach regulations that supplement fruit cutting and inspection at the port of first arrival. In fact, there are pest detection measures in place at every stage of the production process for Hass avocados from Mexico. There are pest survey requirements that must be met in orchards, including fruit fly trapping, and surveys for the avocado stem weevil, seed moth, and seed weevils. Fruit are also cut and inspected in orchards a total of 4,439,013 avocados during the first 4 years of the program. At the packinghouse, a total of 300 fruit per shipment must be cut and inspected in the presence of APHIS inspectors. APHIS has required these additional pest detection activities, in part, because it is aware that inspection at the port of first arrival in the United States alone would not be sufficient to detect pests in imported fruits.

Inspection at the port of first arrival is intended to accomplish two goals. First, inspectors check the documents accompanying the shipment to ensure that the avocados are from an approved orchard and were processed in an approved packinghouse and are accompanied by a phytosanitary certificate. The inspectors also ensure that the limited distribution statement appears on all boxes, that a U.S. Customs Service bond has been secured for the shipment, and that the in-bond papers indicate that the shipment is consigned to an importer in an approved State. Second, the inspectors will select a sample of fruit from each shipment and carefully cut and inspect those avocados to verify their pest-free

status. Inspection at the port of first arrival is essentially a redundant safeguard that serves to verify that all the regulatory requirements applicable to the importation of the avocados have been met.

Comment: It is physically impossible for inspectors, no matter how diligent they are, and no matter how honest their intentions, to protect the United States from pest invasions and infestations given the volume of goods imported into the United States.

Response: APHIS has stated in the past that if zero tolerance for pest risk were the standard applied to international trade in agricultural commodities, it is quite likely that no country would ever be able to export a fresh agricultural commodity to any other country. There will always be some degree of pest risk associated with the movement of agricultural products; APHIS's goal is to reduce that risk to a negligible level. In the case of Hass avocados from Mexico, we believe that the overlapping and redundant safeguards employed in the systems approach will achieve that goal.

Comment: Inspectors at the border stations do not know how to look for a weevil in an avocado, nor do they have time to carefully inspect pieces of fruit under a dissecting microscope.

Border personnel must be provided with specific instruction on the detection of stem weevil in Hass avocado fruit, and APHIS should update and reissue the photo essay guide prepared by G.L. Kreitner to PPQ offices at border ports of entry. Ports of entry should also be adequately staffed so that examination of fruit samples can be done in a meaningful way.

Response: As stated earlier in this document, APHIS inspectors are trained to detect all types of pests in various types of commodities. APHIS is distributing the photo essay as suggested to all approved ports on the Mexican border where Hass avocados are imported prior to the 2001–2002 shipping season. The photo essay will be incorporated into an existing booklet of procedural guidelines on the Mexican Hass avocado import program that is used by port inspectors when they process and inspect shipments of imported avocados. We believe the photo essay, as originally published, is a valuable tool in describing where stem weevil infestations are typically found in avocado fruit, and do not see the need to update it. Furthermore, APHIS believes the level of inspection at border ports is appropriate, given the additional safeguards employed under the systems approach regulations, and is confident that border stations are

adequately staffed to provide agricultural quarantine and inspection services.

Pest Detection in the United States

Comment: The proposed rule states that seven States (Arizona, California, Florida, Georgia, Louisiana, South Carolina, and Texas) in the continental United States are at risk for establishment of four fruit fly species. Do these States have pest detection programs that focus on the pests associated with Mexican Hass avocados?

Response: Arizona, California, Florida, and Texas each have fruit fly detection programs that operate year-round. APHIS is not aware of any detection programs in these or the other three States that focus on avocado-specific pests, though it is possible that local surveillance programs in avocado-producing States may conduct surveys for avocado-specific pests.

Comment: Do the 12 additional States have pest detection programs that focus on fruit fly host crops and fruit fly pests?

Response: The 12 States that we are adding to the Mexican Hass avocado import program do not conduct fruit fly or avocado-specific pest detection programs, likely because those States are not able to provide the combination of host material and climatic conditions necessary to support a reproducing, established fruit fly population, and because none of the 12 States have climatic conditions suitable for the production of avocados.

Trade Issues

Comment: Over 4 years ago, avocado growers in California requested market access to Northern Baja California, Mexico, for California avocados and asked the USDA to initiate the necessary steps to clear the way for exports into Mexico. There is a ready market for California avocados in northern Mexico, yet California growers are prohibited from shipping into Mexico. For 3 years, growers heard nothing in response to their request. In November of 2000, senior representatives from the USDA pledged that they would aggressively pursue access to the Mexican market. Those talks prompted Mexico to prepare a risk assessment for California avocados, which was recently forwarded to the USDA. The Mexican risk assessment stated that California avocados would not be allowed into Mexico until procedures were in place to protect the Mexican avocado growers from being infested by avocado seed moths and seed weevils that could be introduced from California. There is no

existing credible scientific evidence showing that these pests are present in California. By contrast, these same quarantined pests in Mexico are well documented through the scientific literature. APHIS must reject Mexico's bid for expansion as long as the U.S. avocados are not permitted entry into Mexico.

Response: APHIS agrees with the commenter that avocado seed moths and seed weevils are not present in California, and sent a letter to Sanidad Vegetal on September 6, 2001, asking that the Mexican risk assessment be revised and those pests removed from consideration. As of the drafting of this final rule, we have not received a response from Sanidad Vegetal.

Comment: APHIS's primary role is to protect agriculture from the introduction of pests and diseases. This role is compromised by APHIS's new emphasis on promoting and expanding trade.

Response: The Plant Protection Act authorizes the Secretary of Agriculture to regulate exports, imports, and interstate commerce when the Secretary determines such action is necessary to prevent the dissemination of plant pests. The Secretary of Agriculture has delegated this responsibility to APHIS.

APHIS's primary responsibility with regard to international import trade is now, and has been for many years, to identify and manage the risks associated with importing commodities. Because, as we have already noted, there is no such thing as zero risk in international trade, reducing risk to a negligible level is the only realistic approach. If there is no practical way to mitigate a particular risk associated with a product, APHIS will prohibit that product's entry into the United States, as is our right under current international trade agreements; we have done so in the past and will continue to do so when warranted. However, when we determine that the risk associated with the importation of product is negligible, it is our responsibility under those same trade agreements to make provisions for the importation of that product.

The systems approaches developed for citrus from Florida and Texas, apples from Washington, and stonefruit from California are examples of ways that we have found to answer the pest concerns of our trading partners in order to enable the exportation of domestically grown fruits and vegetables. Just as we seek to open foreign markets to our Washington apples or California stonefruit, however, we must also listen to the requests of other nations seeking to export their products to the United States.

Comment: This rulemaking is not based on science. It is based on a political agreement made even before the scientific research/risk assessment was done, and before the proposed rule was written. This is about trade and politics, not science, and is about favoring foreign interests over those of the domestic producer.

Response: This action was predicated on several risk assessment documents that provide a scientific basis for potential expansion of the Mexican Hass avocado import program. Without these risk assessment documents, which have withstood several reviews and public comment periods, APHIS would not have proposed this action. Political interests stimulate consideration of the expansion of trade of agricultural commodities between countries, but all decisionmaking concerning phytosanitary restrictions on trade must be science-based. APHIS stands behind the risk assessment documents that support this rule, and believes they are based on sound science.

Pest List

Comment: The proposed rule accurately states that: "the perseia mite (*Oligonychus perseae*) and avocado thrips (*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." At the time of their first detection by APHIS, however, the label of quarantine pest would have been appropriate. In both cases, APHIS failed to prevent the introduction and establishment of injurious pests known to infest Mexican Hass avocados.

Response: The introductions of the perseia mite and avocado thrip happened independently of the importation of Mexican Hass avocados, as described elsewhere in this document.

Comment: Deficits in the knowledge on the taxonomy, ecology, and biology of the arthropod fauna on avocados in exporting countries may render any mitigation of the risk posed by unknown pests that could be present in growing areas ineffectual.

Response: Avocados and pests of avocados have been studied in detail for many years, especially in Mexico, which is the world's largest producer and consumer of avocados. APHIS is confident that it has identified all pests of quarantine significance known to follow the avocado pathway. Nonetheless, APHIS inspectors are trained to inspect for all quarantine pests, and eight of the nine safeguards employed by the systems approach

provide reduction of the risk posed by hitchhikers and other (unknown) pests.

Comment: One species of thrips, *Neohydatothrips burungae* (Hood), is as common as *S. perseae* on avocados in Mexico and is not known to be present in California. This pest has not been included in USDA's Pest Risk Assessment for Hass avocados from Mexico. Given the common occurrence of *S. perseae* in Mexico on avocados and its pestiferous nature in California, it is highly likely that *N. burungae* could also pose a threat to the California avocado industry.

Response: When we conducted the Supplemental Pest Risk Assessment for the original Mexican Hass avocado import program in 1995, there was no literature available suggesting *Neohydatothrips burungae* (Hood) was associated with Hass avocados. *N. burungae* is now considered a quarantine pest by APHIS; however, to date, we have never intercepted this pest on avocado fruits at a port of entry, nor have we intercepted any thrips in commercial shipments of avocado fruits. We have intercepted other thrips, including species of the genera *Scirtothrips* and *Thripidae*, on avocado leaves imported in passenger baggage. Further, based on findings of thrips on other fruits, we are confident that we can detect thrips infesting Hass avocado fruits if they do indeed follow the avocado fruit pathway; however, evidence to date suggests they do not. For this reason, we are confident that *N. burungae* associated with Mexican Hass avocado fruit poses a negligible risk of being introduced into the United States.

Comment: Researchers have catalogued potentially dangerous pests that do not appear in USDA's pest risk assessment. Johansen collected 38 phytophagous thrips species from avocados in Mexico, identifying seven species, i.e. *Frankliniella bruneri*, *F. chamulae*, *Heliiothrips haemorrhoidalis*, *Pseudophilothrips perseae*, *Scirtothrips aguacatae*, *S. kupandae*, and *S. perseae*, that could be transported via the avocado pathway. Also reported from avocado in Michoacan, Mexico, is *Scirtothrips aceri* (Moulton). Only one of these pests, *Heliiothrips haemorrhoidalis*, is listed in USDA's pest risk assessment. It is important to note that the thrips species discussed above feed on or attack the avocado fruit, and thus, based on their biology, can be expected to follow the pathway of imported Mexican Hass avocados. *Frankliniella bruneri*, *F. chamulae*, *Pseudophilothrips perseae*, *Scirtothrips aguacatae*, *S. kupandae*, and *Neohydatothrips burungae* must be added to USDA's Mexican Action List.

In each case, the species mentioned fall into the "H" or high category in the three criteria outlined USDA's Enhanced Hazard Pest Categorization methodology, indicating that quarantine action is required. Continuation of rulemaking without a revised pest risk assessment given the Department's own process of risk categorization for these species is inconsistent with, and a violation of, international plant health principles and the phytosanitary provisions of NAFTA.

Response: There was no literature available suggesting any of the pests listed above are associated with Hass avocado fruits at the time the 1995 Supplemental Pest Risk Assessment was conducted. APHIS now considers *Frankliniella bruneri* and, as stated above, *Neohydatothrips burungae*, to be quarantine pests. However, for the same reasons described above for *N. burungae*, we believe that *F. bruneri* associated with Mexican Hass avocado fruit poses a negligible risk of being introduced into the United States. We are confident that both thrips are unlikely to be imported in fresh Hass avocado fruit because they prefer leaves and plants over fruit. For this reason, we believe they do not follow the avocado fruit pathway.

Regarding the other thrips listed by the commenter (*Frankliniella chamulae*, *Heliiothrips haemorrhoidalis*, *Pseudophilothrips perseae*, *Scirtothrips aceri* (Moulton), *S. aguacatae*, *S. kupandae*, and *S. perseae*):

- *S. perseae* exists in California, and does not meet the definition of a quarantine pest.
- *H. haemorrhoidalis* is listed in APHIS's 1995 Supplemental Pest Risk Assessment as a pest mainly associated with plant parts of avocado other than the fruit, and is considered by APHIS to be a non-actionable pest if detected during port inspections.
- *F. chamulae*, *P. perseae*, *S. aceri* (Moulton), *S. aguacatae*, and *S. kupandae* have not been evaluated for consideration as quarantine pests, but have not been associated with avocados in any published scientific literature. APHIS has no reason to believe they follow the avocado fruit pathway.

As requested by the commenter, APHIS is adding *N. burungae*, and *F. bruneri* to APHIS's Mexican Action List. We are also evaluating *F. chamulae*, *P. perseae*, *S. aceri* (Moulton), *S. aguacatae*, and *S. kupandae* using APHIS's Enhanced Hazard Pest Categorization methodology to determine whether they should be added to the Mexican Action List as well.

Regarding whether revisions to the pest risk assessment are necessary, APHIS is unaware of any evidence that suggests any of the thrips species listed by the commenter follow the avocado fruit pathway. Until we find evidence as such in scientific literature, we will continue to consider these pests as unlikely to follow the avocado fruit pathway, regardless of their quarantine pest status.

Comment: USDA's Supplemental Pest Risk Assessment states that the pest list for Mexican avocados was generated after a review of the AGRICOLA, CAB, and MELVYL databases, historical decision sheets covering importation of avocados, the U.S. catalogue of intercepted pests and interception records, CMI distribution maps, texts of plant diseases and pathogens, and APHIS files on pests not known to occur in the United States. No attempt has been made to collect information from the most obvious and important source, independent scientific researchers who have conducted field work on avocado pests in Mexico and the United States.

Response: When gathering information on what pests to include in a pest list for a risk assessment, APHIS considers only information from published scientific literature. This is the only way to ensure that we cite only research that has been peer-reviewed. If independent scientific researchers have finalized and documented findings that would be relevant to APHIS risk assessments, we would expect that those findings would have been peer reviewed and published. APHIS does not contact researchers to solicit information on pests that may be relevant to particular risk assessments.

Systems Approach

Comment: The use of restrictions on the distribution of avocados is meaningless. Once an avocado or any other product is legally imported into this country, there are no further restrictions on the fruit after importation. Unaware and unscrupulous importers are then free to transship the product anywhere in the United States. They are frequently found all over Florida and contain pests.

Response: If the limited distribution requirement was the only means of risk mitigation available in the Mexican avocado import program, the open nature of the U.S. marketing and transportation systems would be a matter of concern. Limited distribution is, however, only one of a series of safeguards designed to prevent the introduction of pests into the United States through the importation of avocados from Mexico. We have not

expected limited distribution to be foolproof, but we also do not expect that infested avocados will be entering the United States through legally imported commercial shipments in the first place. Further, we anticipate that unscrupulous importers will be the exception, rather than the rule, so we believe that the restrictions on distribution of the avocados will be widely observed, rather than ignored. As to the finding of imported Hass avocados in Florida, APHIS is aware of only 2 cases where avocados were found in Florida. In both cases, one less-than-full box of avocados was found, and the scale insect contained therein is not a pest of quarantine significance.

Comment: APHIS cannot say that the risk of pest introduction associated with increased Mexican Hass avocado imports is zero. The risk may be low, but the risk only applies to U.S. growers.

Response: APHIS has not stated that the risk associated with expanding the Mexican Hass avocado program is zero. As stated earlier in this document, if zero tolerance for pest risk were the standard applied to international trade in agricultural commodities, it is quite likely that no country would ever be able to export a fresh agricultural commodity to any other country. APHIS has performed a risk analysis and has concluded that the risk of pest introduction is negligible. APHIS has deliberately not defined the point at which risk becomes negligible. The use of specific, numerical thresholds can have important consequences in international trade, as their reciprocal use by other countries could adversely affect the export of domestic products and hinder trade in commodities that can be safely exported to other countries. APHIS thus separately assesses individual risks for specific commodities and applies the professional judgement of its technical and scientific experts. This can result in different quantified risks being deemed negligible. This approach allows APHIS to protect domestic producers from risks which are not negligible while maintaining necessary flexibility for U.S. export markets.

Comment: The risk assessment on which the avocado import program is based is flawed because it is based on, and begins with, estimated probabilities.

Response: Risk assessments are intended to estimate the potential that future events can occur. Since risk assessments often are conducted to evaluate the use of systems that did not previously exist, there is no feasible way for risk assessors to begin the process with historical or other hard data

relevant to the scenario or system being assessed. In the case of Hass avocados from Mexico, in the absence of hard data, estimates of the probability that certain events could occur were made by expert scientists to evaluate the risk mitigating measures used in the import program. Using this method enabled APHIS to account explicitly for the uncertainty associated with the various parameters of the Mexican Hass avocado risk model.

Comment: When APHIS used Monte Carlo simulations to develop risk estimates for the Mexican Hass avocado import program, it based the simulations on two models; one model in which Mexican avocados are imported under no special restrictions, and the second model employing use of the systems approach. APHIS should have modeled the previously existing system., i.e., the quarantine that was in place for more than 80 years.

Response: APHIS acknowledges that we could have used Monte Carlo simulations to develop a risk assessment that considered the pre-1997 status quo in which the importation of Hass avocados from Mexico was prohibited. However, such simulations would have simply been a paper exercise, given that the pre-1997 quarantine is no longer in place; given that the purpose of the risk assessment was to consider the risks associated with the 1997 proposed rule, such an exercise was not warranted.

Comment: The proposed rule stated that an eradication program would be initiated if an introduced avocado pest became established. It should have said that an eradication program would be initiated if a pest is detected.

Response: We did not make such a statement in the proposed rule; however, the environmental assessment for the proposed rule did have a typographical error that may have led the commenter to make this statement. In the environmental assessment, APHIS states that "in the highly unlikely event that an avocado pest should be introduced into the United States established, appropriate eradication actions would likely be initiated." The word "established" should not have been included in that sentence and has been removed in the final draft. Regardless, a single detection of a pest would not warrant eradication, whereas introduction and establishment of a pest certainly would.

Peer Review/Cooperation

Comment: A third party should evaluate the surveillance techniques associated with the Mexican Hass avocado import program, including fruit cutting and trapping.

Response: APHIS has conducted two reviews of the Mexican Hass avocado import program in the 4 years since its inception. Representatives of domestic avocado growers (i.e., the California Avocado Commission) participated in both reviews, and the State of California participated in the second review. In fact, the representatives of domestic avocado growers helped to draft the workplan for the operation of the program, and has had many opportunities to participate in the development and review of the program. APHIS believes it has been very transparent with the public throughout the existence of the program, and has shared information whenever requested. APHIS sees no need for another third party to review the documents on which the program is based, especially given the success of the program thus far.

Comment: APHIS should allow external peer review of the pest risk assessment for the Mexican Hass avocado import program. Peer review should not be conducted by another USDA agency.

Response: APHIS believes that the pest risk assessment for the Mexican Hass avocado program has been subjected to significant peer review already. Each risk assessment document on which the program is based has been made available for public comment for at least 60 days, some of those documents more than once. APHIS has received and considered numerous written comments on the risk documents as well as oral comments made at public hearings and has made changes to documents when appropriate. APHIS sees no need for any additional peer review of its risk assessment documents, as ample opportunity has already been provided for the public to submit its opinions.

Risk to Host Material-Producing States

Comment: The current Mexican Hass avocado import program places Florida and other southern States at risk for new pest introductions.

Response: The systems approach regulations are designed to mitigate the risk that pests could be introduced into the United States via imported Mexican Hass avocados. Distribution of avocados is not allowed in Florida and several other southern States. As stated elsewhere in this document, the importation of commodities from foreign countries is not without some risk, but APHIS believes that the regulations render the risk of new pest introductions negligible.

Comment: Data for San Diego County, CA, show that over half of the 66 single fruit fly finds in San Diego County from

1991 to 2000 occurred during the proposed winter shipping period of November to April. There is a high risk that fruit flies could become established if introduced into California during those months.

Response: The Sequeira, *et al.* study confirms that most of the State of California is at risk for establishment of Mexican fruit flies. However, the intent of the regulations is to ensure that (1) Hass avocados are not shipped to California, and, (2) even in the event that they are shipped to California, that the imported avocados do not contain pests.

Comment: An increase in the volume of imported fruit will result in a proportional increase in the risk of a pest introduction.

Response: Indeed, increased volume of imports can increase the risk that a pest could be introduced into the United States. The risk assessment documents on which this final rule is based indicate that even if imports increase as a result of this rule, the risk of pest introduction associated with the increased volume of imports is still negligible. As explained in the Information Memo for the Record, the 1995 Supplemental Pest Risk Assessment (as well as the 1996 Addendum) estimated that between one and two 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 one of the four years that the program has been in place. During the first four years of its existence, the program averaged only 834,675 boxes per year. Because of this, we believe that the 1995 and 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 estimates used in the 1995 and 1996 assessments, and their results would remain valid.

Treatment of Commodities

Comment: Mexico uses chemicals and pesticides that have been outlawed in the United States since the early 1970's, DDT being one of them. The growers in the United States are not allowed to use the chemicals that Mexican growers can use.

Response: The U.S. Food and Drug Administration (FDA) samples and tests imported fruits and vegetables for pesticide residues. The U.S. Government does not have any control over what pesticides are approved for use in foreign countries. The Environmental Protection Agency has

regulations that address the exportation from the United States of pesticides that are not registered for use in this country and works with foreign environmental protection agencies and agricultural producers to promote safer pesticide use and food production practices. There is a variety of pesticides and other pest control measures available for use in the United States in the highly unlikely event that a plant pest is introduced into this country via Hass avocados imported from Mexico in accordance with the regulations.

Comment: There is no post-harvest treatment available for *Anastrepha* spp. fruit flies in avocados. When fruit flies were found in Fallbrook, CA, in 1999, many avocado growers lost a great deal of fruit because they could not send fruit out of the quarantined area during the 9-month quarantine period. Commodity post-harvest treatments were available to growers of other fruits and vegetables. Has APHIS evaluated post-harvest treatment protocols, including irradiation, for fruit fly hosts in the seven at-risk States? These treatment options should have been reviewed and validated in the environmental assessment as required by NEPA. When will they become available to growers?

Response: As stated earlier in this document, APHIS is evaluating protocols that would facilitate the interstate movement of Hass avocados from fruit fly quarantined areas in the United States. Currently, there is no available post-harvest treatment for Hass avocados. Research on various varieties of avocados has shown that treatment, including irradiation, has adverse effects on fruit quality. It is likely, given the quality-related issues involving post-harvest treatments, that regulatory approaches, perhaps modeled after the Mexican Hass avocado systems approach, could prove to be more practical for growers.

The environmental assessment referred to above was prepared specifically to address the potential environmental impacts that could be associated with implementation of the proposed rule. APHIS does not agree that treatment options and a validation of prescribed treatment protocols related to a potential eradication program should be discussed in the environmental assessment for the Mexican Hass avocado import program.

Comments Related to the Study by Sequeira et al.

Comment: Sequeira, *et al.* report that Mexican fruit flies do not attack young fruit, but no source is cited for this unsubstantiated conclusion. Although

Sequeira notes that his approach is "conservative" with respect to phenological windows, insufficient scientific evidence is presented to conclusively establish that young fruit is not subject to attack by *Anastrepha* spp. fruit flies.

Response: Evidence for Sequeira, *et al.*'s observation that fruit flies do not prefer young fruit can be found in: Leyva-Vazquez, Browning, and Gilstrap. 1991 "Development of *Anastrepha ludens* (Diptera: Tephritidae) in Several Host Fruit." *Environmental Entomology* 20(4): 1160-1165.

Comment: Mexican Hass avocados should not be imported during the months of March and April because the temperature and climatic conditions could foster a mating population of fruit flies.

Response: The findings of the Sequeira, *et al.* study indicate that many U.S. States are at risk for the establishment of *Anastrepha ludens*. These States include California and Florida, among others. All States proposed for expansion of the Mexican Hass avocado import program were found by Sequeira, *et al.* to be at low risk for establishment of *Anastrepha ludens* because they do not have the combination of hosts and climatic conditions needed to support an established population of fruit flies. Nonetheless, because fruit imported on April 30 could stay in the marketplace until late May (when host material could be beginning to become available in some approved States), APHIS is revising the approved shipping season for Hass avocados imported from Mexico, as stated earlier in this document. APHIS believes that revising the shipping season, which will run from October 15 through April 15, will reduce the risk that fruit flies, if present in imported Mexican Hass avocados, could be introduced into areas with conditions suitable for even a short period of survival.

Comment: The mean maximum temperatures in Missouri and other States along the southern boundary of the proposed Hass avocado distribution area will promote fruit fly development in March. The 65 °F temperatures there are optimal for pest development, and host crops like apricots are well along in terms of development by April. These are facts confirmed with tree fruit specialists in every State along the southern boundary of the proposed shipping area.

Response: An area's mean maximum temperature is only a partial indicator of the likelihood that fruit flies can become established there. In identifying areas in the United States that are susceptible for

the establishment of *Anastrepha ludens*, the Sequeira, *et al.* study found that a given area must have adequate temperatures (including mean maximum and mean minimum temperatures), adequate hosts (in a susceptible stage), and other environmental needs (including adequate moisture and low prevalence of predators and parasites) for fruit flies to become established there.² Furthermore, research shows that optimal temperature for fruit fly development is not 65 °F but approximately 77 to 86 °F.³

APHIS does believe that States proposed for expansion of the Mexican Hass avocado import program do not have the combination of these elements needed to support the survival of fruit flies in March and April, as stated earlier in this document. We have revised the shipping season, as described earlier in this document, to reduce the possibility that imported avocados could remain in the marketplace until mid to late May, when suitable fruit fly host material is beginning to become available.

Comment: Fruit that enters the United States on April 30th would stay in the marketplace pipeline until late May, when many of the commercial crops with early bloom dates would be bearing fruit that is unquestionably susceptible to attack by fruit flies. Climatic conditions at that time of year would also be more than sufficient to support fruit fly growth and development. Only two of the proposed States (Maine and North Dakota) have mean temperatures below 60 °F in May. Most of the other States have mean temperatures that range from 60 to 70 °F or above, and according to scientific

literature, the optimal temperature for survival of adult Mexican fruit flies is 59 °F.

Response: As stated in response to the previous comment, in this final rule, we have revised the shipping season to reduce the possibility that imported avocados could remain in the marketplace until mid to late May, when suitable fruit fly host material is beginning to become available. Furthermore, research shows that optimal temperature for fruit fly development is not 59 °F but approximately 77 to 86 °F.

Comment: Mean maximum temperatures during April are more than sufficient to support fruit fly development. In May, when a piece of infested fruit might still be in the market, mean temperatures are favorable across many of the approved and proposed States. According to historical records, States with mean temperatures of between 60 to 70° F in May include: Utah, Kansas, Nebraska, Missouri, Iowa, Kentucky, Indiana, Virginia, West Virginia, Maryland, Delaware, New Jersey, Minnesota, South Dakota, Wisconsin, Illinois, Michigan, Ohio, Pennsylvania, New York, Massachusetts, Connecticut, Rhode Island, and Idaho. Over the same period, States with mean temperatures above 70° F during May include Kentucky, Illinois, Virginia, West Virginia, and Missouri. There are several States where host material is available and ambient air temperatures are optimal for survival and reproduction of adult fruit flies introduced via an infested container or piece of fruit that arrives during the first 3 weeks in May. Specifically, commercial production of cherries would be well underway in Colorado, Idaho, Kansas, Utah, and Virginia. In addition, commercial peach production would have progressed substantially in Colorado, Kansas, Missouri, and Virginia by this time of year. Other crops that would be vulnerable in May include plums and prunes in Idaho, apricots and native *Prunus* spp. in Kansas, and apricots and native cherries in Missouri. Mean temperatures in all of the States listed would be optimal for adult fruit flies.

Response: The Sequeira, *et al.* study acknowledges that temperatures during late spring and summer in some of the States cited above are adequate for Mexican fruit fly development, but not establishment. APHIS believes it would be exceedingly unlikely that fruit flies would be introduced into approved States in commercial shipments of Mexican Hass avocados in such numbers that their populations would reach outbreak levels in a matter of a

few months. Extended cold periods during the winter would destroy surviving stages and make establishment very unlikely. Note: The 60 to 70°F temperatures cited by the commenter are not consistent with the reported optimal developmental temperatures for Mexican fruit flies, which are 77 to 86 °F.

To further reduce the possibility that fruit flies could survive if introduced into approved States from mid- to late May, we have revised the approved avocado shipping season, as described earlier in this document.

Comment: Colorado and Utah border high-risk States where commercial oranges, grapefruit, peaches, apricots, plums, and other hosts are grown. These States are at risk for establishment of fruit flies. Will APHIS adopt a buffer zone approach for fruit flies and not just avocado-specific pests?

Response: APHIS stated in the proposed rule for this action that “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.” We did not intend for this to mean that we were adopting a “buffer zone” approach for avocados. In fact, we proposed to expand the Mexican Hass avocado import program to include Colorado, Idaho, Iowa, Kansas, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Utah, and Wyoming because the Sequeira, *et al.* study found that each of these States has climatological conditions that put them at low risk for fruit fly establishment.

Comment: Given the maximum duration for the development of each life stage of fruit flies, as documented in the scientific literature, it appears reasonable to assume that under certain circumstances, the total preimaginal development time for the Mexican fruit fly could easily exceed 100 days. Climatic conditions and host availability in destination States are not only important at the time a shipment arrives, therefore, but also up to 100 days later. Fruit fly eggs or larvae in a piece of infested fruit that arrives in one of the proposed States in April would be capable of survival and, upon completion of their development into adults, they would emerge to find optimal climatic conditions and an ample food supply.

Response: APHIS agrees that, hypothetically, the total preimaginal development time for the Mexican fruit fly could easily exceed 100 days based on maximum durations of each life stage. However, we believe it is highly unlikely that development could

² According to the following sources:

Aluja, M., J. Guillen, P. Liedo, M. Cabrera. E. Rios. 1990. “Fruit infesting tephritids and associated parasitoids in Chiapas, Mexico.” *Entomophaga*. 35(1): 39–48.

Celedonio-Hurtado, H., Aluja, M., Liedo, P. 1995. “Adult population fluctuations of *Anastrepha* species (Diptera: Tephritidae) in tropical orchard habitats of Chiapas, Mexico.” *Environmental Entomol.* 24(4): 861–869.

Leyva-Vazquez, J.L. 1999. “Control biológico de moscas de la fruta: uso de parasitoides.” *Vedalia*. 6:15–21.

Thomas, D.B. 1995. “Predation on the soil inhabiting stages of the Mexican fruit fly.” *Southwestern Entomol.* 20(1): 61–71.

³ According to the following sources:

Leyva-Vazquez et al. (1991),

Leyva-Vazquez, J. 1988. “Temperatura umbral y unidades de calor requeridos por los estados inmaduros de *Anastrepha ludens* (Loew) (Diptera: Tephritidae).” *Folia Entomologica Mexicana*. No. 74: 189–196.

Thomas, D.B. 1997. “Degree day accumulations and seasonal duration of the preimaginal stages of the Mexican fruit fly.” *Florida Entomol.* 80(1): 71–80.

actually occur across such a time span based on the simple fact that there are few hosts that would provide suitable host material for fruit fly life stages for 100 consecutive days.

Preimaginal developmental periods of more than 3 months are unlikely to occur in the case of imported avocados because fruits are perishable and not held in storage or in the commercial pathway for extended periods. APHIS believes that fruit are typically present in the commercial pathway for no more than 30 days. However, even if the flies were to emerge after a prolonged preimaginal period, when they emerge they would likely find prolonged periods where suitable hosts are absent, along with prolonged freezing conditions during the winter-time. We believe these facts make establishment of this tropical/sub tropical pest very unlikely.

Comment: Experiences in San Jose, CA, in 1980–81 proved the conclusions from the Flitters and Messenger Medfly temperature and humidity study cited by Sequeira, *et al.* to be absolutely and totally incorrect. The conclusion by Flitters and Messenger that Mexflies could not establish and maintain populations in areas such as Sebastopol, CA, is highly suspect. The importance of avoiding a “Medfly experience” with *Anastrepha* fruit flies, based on faulty assumptions and data, strongly suggests that new temperature and humidity studies, using improved, modern technology for laboratory work and climatic data, be conducted by ARS scientists before any expansion of the avocado import program is permitted.

Response: The research referred to above by the commenter refers to a different study by Flitters and Messenger involving Medflies that was not used as a reference by Sequeira, *et al.* It is noted in the comment that in the Medfly study, the areas of San Jose, CA, were considered low risk for Medfly establishment. In contrast to that study, the Sequeira, *et al.* study identifies most of northern California as a high risk area for the establishment of *Anastrepha ludens*.

APHIS does not believe that the Sequeira *et al.* study is an extrapolation of Flitters and Messenger.⁴ Unlike Flitters and Messenger, Sequeira, *et al.* analyzed the likelihood of establishment based on the pest’s requirements for survival. These requirements included: (1) Availability of hosts, (2) host presence in a susceptible condition (i.e.,

with susceptible fruit), (3) presence of temperatures that are above the minimum below which development does not occur, (4) absence of extended periods of freezing conditions (based on long-term climatological averages from National Oceanic and Atmospheric Administration data), and (5) other environmental needs (including adequate moisture and low prevalence of predators and parasites) for fruit flies to become established there. APHIS is confident that the findings of the study, which have been reviewed by our NAPPO counterparts in Canada and Mexico, are scientifically sound, and believes they provide adequate assurance that fruit flies could not become established in the States proposed for expansion.

Comment: USDA must recalculate the probability of detecting or failing to detect an infestation of *Anastrepha* spp. fruit flies along the Mexican avocado pathway, taking into consideration problems inherent in the fruit cutting and trapping data used as a basis for the proposed rule. This should also be done for the Sampling Analysis section of the Sequeira, *et al.* report, as well as for the Department’s Supplemental Pest Risk Assessment. New Monte Carlo simulations should be run, and the resulting estimates of the frequency of a pest outbreak should be subjected to external peer review. USDA should also rerun the simulations and recalculate the possibility of an outbreak of stem weevils based upon deficiencies associated with fruit cutting conducted to detect these pests, and the documented evidence that confirms that stem weevils can be transported in fresh Hass avocados.

Response: As stated earlier in this document, APHIS is confident that fruit cutting and fruit fly trapping associated with the Mexican Hass avocado import program are being conducted properly, and are adequate to detect pests as intended. Furthermore, APHIS has not proposed to expand the program based solely on the results of fruit cutting and trapping results. Our decision to propose to expand the program was based on a number of factors, including the results of the Sequeira, *et al.* study of areas in the United States that are susceptible to establishment of *Anastrepha ludens*.

Comment: Consideration of fruit maturity is lacking from all the current risk assessment work pertaining to fruit flies and avocados. Fruit maturity is different than fruit ripeness. According to research by ARS and University of Hawaii researchers, papaya maturity is critical in determining the host susceptibility to fruit fly infestation.

Response: In laboratory tests, avocado fruit of various stages of maturity and ripeness were subjected to forced exposure to fruit flies. In these tests, fruit flies were only able to lay viable eggs that developed and produced larvae in fruit that were removed from trees and held for several days. A large volume of research has been conducted on the susceptibility of avocados to infestation by fruit flies, but little evidence that is conclusive in regard to avocados’ host status.

None of this research suggests avocado maturity is more worthy of consideration than avocado ripeness in determining susceptibility to infestation with fruit flies.

Comment: Why is the “optima” temperature for fruit fly activity used as the benchmark in establishing the threshold for establishment of fruit flies? Given the consequences of an infestation, it would be justified to use the more conservative benchmark that incorporates minimum temperatures.

Response: The Sequeira, *et al.* study did not use temperature optima. Rather, it used a model that accounts for (1) slower rates of fruit fly development at cool temperatures down to the reported absolute minimum temperature (49 °F) at which development occurs, and (2) faster rates of development as the temperature increases. Temperatures below freezing are considered lethal for all stages. However, the Sequeira, *et al.* study used a conservative approach whereby only areas with prolonged temperatures below freezing were considered potentially lethal. Also, even though young fruit is not considered susceptible to damage, Sequeira, *et al.* used a conservative approach and considered the entire phenological period from bloom to last possible harvest as potentially susceptible. APHIS believes these approaches employ an even more conservative approach than that suggested by the commenter.

Comment: Given the obvious flaws inherent in Sequeira’s extrapolation of conclusions from Flitters and Messenger (1965), USDA should conduct new laboratory research on the effects of temperature and humidity on fruit fly development and survival. Studies should take advantage of major changes and improvements in quality control and rearing technology to ensure the vigor and competitiveness of laboratory flies. Data generated can be used to calibrate developmental parameters for the Department’s degree-day model, which can then be used to properly characterize all areas of the United States into risk regions.

⁴ Flitters, N.E. and P.S. Messenger. 1965. “Effect of temperature and humidity on development and potential distribution of the Mexican fruit fly in the United States.” *Tech. Bull.* No. 1330. USDA-ARS. 35pp.

Response: The Sequeira, *et al.* study did not extrapolate from Flitters and Messenger, although the findings of Sequeira, *et al.* agree with the results reported by Flitters and Messenger. More recent developmental studies (including Leyva-Vazquez *et al.* (1991), Leyva-Vazquez (1988), and Thomas (1997), each referenced earlier in this document) are consistent with the reports of Flitters and Messenger regarding conditions under which *Anastrepha ludens* develops. Sequeira, *et al.* used life table analyses referred to earlier in this document as the basis for the developmental model. As stated above, the developmental model was one element in a study that also evaluated host distribution, availability, susceptibility, winter-time freezing conditions, as well as the avocado pathway.

Comment: APHIS must focus on the "introduction" of *Anastrepha* spp. fruit flies, rather than "establishment" when characterizing risk. Fruit flies do not need to become established to become a quarantine risk, and a successfully introduced population can easily be transported to susceptible areas of commercial agricultural production.

Response: As stated earlier in this document, APHIS believes it would be exceedingly unlikely that fruit flies would be introduced into approved States in commercial shipments of Mexican Hass avocados in such numbers that their populations would reach outbreak levels in a matter of a few months. Nonetheless, in response to a previous comment, we are revising the approved shipping season for imported Hass avocados to run from October 15 through April 15. We believe this change will further reduce the risk that fruit flies could survive in approved distribution areas in the highly unlikely event that they are present in imported Hass avocados.

Comment: The Sequeira study should be subject to rigorous external peer review. APHIS has stated that the Sequeira study "has undergone a sufficient internal review process to use as an aid in making a sound regulatory decision." Again, APHIS relied almost exclusively on its own APHIS-PPQ staff to critique a document potentially affecting thousands of stakeholders. The California Department of Food and Agriculture, citrus industry leaders in potentially affected States, researchers and entomologists in California and Florida, and many other experts were never sought out, nor were they aware of the existence of the study until a final version of it appeared on the internet.

Response: The development of the Sequeira, *et al.* study included

consultation with scientists outside of APHIS and with scientists associated with Mexican and American universities. Nonetheless, APHIS believes that the rulemaking process has subjected the Sequeira, *et al.* study to a very wide peer review. The process of soliciting and responding to public comments is not limited to internal USDA input, but seeks the widest possible range of comments and questions from all interested persons. Public comments are sought to help APHIS improve and enhance its decisionmaking and the resources on which decisions are based. If commenters submit information that suggests changes to APHIS documents are necessary, APHIS evaluates the information and may or may not make changes in response. In the past, many APHIS rules and the supporting documents for them have been reviewed and enhanced based on public comments.

Comment: Where is the USDA analysis of the complete temperature model for fruit fly activity as it relates to the proposed rule change in the 12 additional States and as it relates to the 7 at-risk States?

Response: The analysis of climatology contained in the Sequeira, *et al.* study was not limited to several States but included the entire continental United States.

Comment: Statements in the Sequeira, *et al.* report regarding host phenology appear to be inconsistent with information shown in Figure 2.

Response: Sequeira, *et al.*'s approach to estimating the periods when susceptible fruit were present (generally from post-bloom to last harvest) involved queries to all PPQ State Plant Health Directors as well as State Plant Regulatory Officials. In some cases, the information was not consistent, and when responses were not obtained, Sequeira, *et al.* used available literature (sources are noted in the document). Some inconsistent reports were due to changes in regional trends. For example, Plant Regulatory Officials in San Diego tended to provide State phenologies that were more appropriate to Southern California than elsewhere. However, in the final analysis, Sequeira, *et al.* were conservative given the reported variability. Their approach was to maximize the phenology period to reflect this. For example, Sequeira, *et al.* considered California to have fruit present year-round at all locations and that this fruit is always susceptible. That, in effect, is a conservative approach because clearly there are no fruit in parts of California for varying periods of time. We have reviewed the

plant phenological information used in the study and are confident that it is accurate.

Economic Issues

Comment: The economic analysis only looks at the Hass avocado market, and does not take into account the effects on consumers and producers of other varieties such as Fuerte, Pinkerton, etc. The entire U.S. avocado market would be affected by the proposed ruling and needs to be included in any analysis.

Response: The analysis assumes that consumers do not readily substitute between Hass avocados and other varieties of avocado. For that reason, the other varieties are not included in the analysis. Significant differences in price suggest a lack of substitutability. For example, during the first 8 months of the current season, the average grower price for Hass avocados was \$0.73 per pound, compared to an average price for Fuerte avocados of \$0.24 per pound and a combined average price of \$0.22 per pound for "other" varieties. If Hass and non-Hass avocados were close substitutes, then such large price differences would not exist. Including all domestically produced avocados in the analysis would increase the baseline, reducing the magnitude of the estimated impacts.

Comment: The analysis is based on the 6-month period from November through April. However, avocados can be stored on trees. Therefore, harvesting can be shifted between time periods. The 60 percent of the crop that is currently shipped from May through October is an increase in the percentage that was shipped during this same time period before Mexico was granted partial access to the U.S. market. Therefore, the analysis should be done for the entire year.

Response: We consider it appropriate to base the analysis on domestic avocado shipments for the November-April period. California producers may respond to increased imports from Mexico by postponing the harvesting of a portion of their production for shipment during the peak May-October season. However, inclusion in the analysis of possible seasonal marketing adjustments would not substantially change the results of the analysis. Analyzing increased imports from Mexico in terms of year-round domestic production would simply reduce the size of expected impacts. The percentage decline in price, gains to consumers/merchandisers and losses to producers would all be smaller.

Comment: Both the national and regional models are very short-run

models that assume that the supply of avocados is fixed and, therefore, it ignores supply adjustments to falling prices. In the short run, supply is responsive to changes in prices through decisions made during harvest and at the handler level. In the long run, producers would adjust to the changes in market prices by removing land in production, causing market prices to rise. The consequence of the exclusion of a supply response in the economic model means that both the gains to consumers and the losses to producers are overestimated. Costs to handlers as a result of lower production also cannot be calculated using the USDA model.

Response: As noted by the commenter, relaxing the assumption of fixed supply would result in lower estimates of consumer/merchandise gains and producer losses. However, the net impact of the rule would remain positive. A fixed supply is assumed in the analysis because avocado is a perennial tree crop. An avocado tree started as a nursery seedling takes 3 to 4 years to begin bearing fruit, and a tree grown from seed can take 5 to 13 years before yielding its first fruit. In the short term, producers can delay harvest in response to market conditions, although this may affect the tree's productivity in succeeding seasons. In the longer term, land may be removed from production in response to falling prices, but for other reasons as well. Bearing avocado acres in California decreased by more than 22 percent between 1987/1988 and 1999/2000, and yet over this same period levels of production and producer prices showed no discernable pattern of decline. Handlers adjust to seasonal variations in supply.

Comment: The analysis ignores the net effect of the proposed ruling to California. An analysis of Mexico's imports into the 19 northeastern States since 1997 shows that the net effect on consumer and producer welfare within California is negative, even though California consumers benefit. In addition, the decrease in producer surplus is about 10 times larger in the short run and 6 times larger in the long run than the increase in consumer surplus.

Response: During the 1999/2000 season, about 40 percent of California Hass avocado shipments remained within that State. As the commenter points out, when only California consumers/merchandisers are considered, their expected gains are outweighed by the expected losses of California's avocado producers. This consequence is predictable, given that essentially all domestically produced Hass avocados are grown in California.

The Regulatory Impact Analysis examines impacts on approved and nonapproved States as defined in the rule. We do not believe a separate analysis of net impacts for California alone is appropriate.

Comment: The analysis assumes that the proposed expansion would result in an increase in imports from Mexico of 16.87 million pounds. The assumption is that Mexico would displace California shipments to the additional approved regions. This seems to be a reasonable starting point, however it is impossible to know precisely what the increase in prices will be. Therefore, a sensitivity analysis based on higher and lower levels should also be included.

Response: Whether more or less than the 16.87 million pounds of additional avocados assumed in the analysis are actually imported from Mexico, the pattern of impact remains the same: A decline in the price of avocado, with gains to consumers/merchandisers exceeding losses to domestic producers. Fewer additional imports would result in less of an effect on price, and smaller losses and gains; a larger increase in imports would mean a larger price effect, and larger losses and gains. Assuming the same price elasticities of supply and demand, the net impact is positive in all cases. For example, using the national model, additional imports of 10 million pounds would result in a price decline of 7 percent, with consumer/merchandise gains of \$16.1 million and producer losses of \$10.6 million; additional imports of 40 million pounds would lead to a price decline of 28 percent, with consumer/merchandise gains of \$70.0 million and producer losses of \$42.5 million.

Comment: The elasticity of demand used in the Regulatory Impact Analysis is -0.86 for Hass avocados, a number similar to the one estimated by Carmen and Craft for the entire California avocado market. Using techniques developed by Armington, the elasticity of demand for only Hass avocados is estimated at -1.2 . The analysis correctly states that if demand is more elastic, then the costs to producers will decrease. However, the gains to consumers will also decrease and that is missing from the analysis.

Response: The magnitude of estimated impacts depends on the size of the elasticities. If a price elasticity of demand of -1.2 is assumed instead of -0.86 , and the price elasticity of supply is kept at zero, the national model shows a price decline of 8.6 percent (compared to 12 percent), producer losses of \$12.8 million (compared to \$17.9 million) and consumer/merchandise gains of \$19.8 million

(compared to \$27.6 million), for a net benefit of \$7.0 million (compared to \$9.7 million). These results, as well as those for the regional model when assuming a price elasticity of -1.2 , are shown in an addendum to the Regulatory Impact Analysis. Both merchandiser/consumer benefits and producer losses would be smaller, assuming a price elasticity of demand of -1.2 rather than of -0.86 , but the net impact remains positive.

Comment: The analysis notes that average total shipments of California Hass avocados for the 1999–2000 season were 20 percent greater than shipments between the 1986 and 1994 seasons. However, average shipments between the 1997 and 2000 seasons were 12 percent lower than shipments between the 1994 and 1996 seasons, the period just prior to Mexican Hass avocado imports.

Response: We do not have data for domestic shipments during the 1994/1995 and 1995/1996 seasons. Quantities of avocados shipped during the 1999/2000 season to the approved and nonapproved States are the basis for the assumed level of additional avocado imports from Mexico. As indicated in response to other comments, whether a larger or smaller quantity of imports is assumed, the direction of the effects is the same: Price falls, with consumer/merchandise gains and domestic producer losses resulting in a net positive impact. Shipment levels fluctuate from year to year, as do production levels and farm prices. Although California's avocado acreage has been in decline since the late 1980s, crop values (price times quantity produced) have trended upward. Crop values over the 4-year period 1996/97 through 1999/2000 were higher than at any previous time.

Comment: The analysis discusses the decrease in shipments of California Hass avocados and increase in prices since Hass avocado imports have begun. It does not mention the establishment of an exotic pest, avocado thrips, that has reduced marketable yields and increased costs of production during this same time period.

Response: The purpose of the economic analysis, as required by Executive Order 12866, is to evaluate the impact of the rule on U.S. entities. The analysis should include factors affecting the rule or influenced by the rule. Establishment of avocado thrips in California occurred independently of avocado imports from Mexico. This pest's impact in California is not directly pertinent to the analysis. Effects of additional imports from Mexico are

estimated without reference to production costs or yields.

Comment: The analysis lacks an estimate of the expected costs to consumers and producers should an exotic pest become established in the United States as a result of Mexican Hass avocado imports. An economic analysis of the effects of avocado thrips becoming established in California shows a decrease in avocado consumer and producer welfare since the 1997 season, even though increased imports from Mexico have benefitted consumers. While a risk analysis would be difficult at this time given that many avocado pests are undescribed or their impact unknown, the potential costs need to be addressed in some manner. This is especially important for the regional analysis. The regional analysis assumes the existence of a price discrepancy between the approved and non-approved regions. As the price discrepancy increases, the risk of non-compliance with APHIS regulations increases, increasing the risk of an exotic pest becoming established.

Response: The Regulatory Impact Analysis estimates annual net benefits that can be expected to result from this rule. The cost of a possible pest introduction would depend upon its likelihood of occurrence, and upon the reduction in yields and increase in production costs that would ensue. The introduction of a pest or disease would adversely affect the economic health of the avocado industry. However, for the purposes of our analysis, the likelihood of such an event must be weighed against the certainty of the trade effects. As APHIS has concluded that the introduction of plant pests is extremely unlikely, we believe that consideration of the costs of pest introduction would not substantively change the findings of our analysis. APHIS conducts economic analyses for import-related rulemaking using the assumption that the importation of a particular plant/plant product (or animal/animal product, for that matter) will not result in the introduction of pests or diseases; indeed, the prevention of such introductions is a primary goal of those rulemakings. APHIS does, however, routinely attempt to quantify, to the extent possible, the size (in dollar terms) of the domestic industry that stands to be affected by a rulemaking. In this instance, impacts on California avocado producers have been examined in terms of additional avocado imports from Mexico.

Comment: USDA should establish a mechanism to compensate U.S. growers who suffer economic losses attributable to pests imported with Mexican Hass

avocados. What mechanisms are planned, and how will they be funded?

Response: The USDA's authority for the payment of compensation is found in § 415 of the Plant Protection Act, which provides that the Secretary may pay compensation to any person for economic losses incurred by the person as a result of action taken by the Secretary pursuant to a declaration of extraordinary emergency. The Secretary may determine that an extraordinary emergency exists because of the presence of a plant pest or noxious weed that is new to or not known to be widely prevalent in or distributed within and throughout the United States and that the presence of the plant pest or noxious weed threatens plants or plant products of the United States.

Environmental Assessment

Comment: The environmental assessment for the proposed rule does not address the fact that shippers have an economic incentive to develop mechanisms to smuggle avocados into areas outside the approved distribution area.

Response: APHIS believes that the restrictions imposed under the systems approach regulations discourage the smuggling of avocados into nonapproved areas. As stated earlier in this document, the time and effort involved in repackaging and restickering Mexican Hass avocados would likely negate the incentive to smuggle them. Further, persons who move Hass avocados into nonapproved areas are subject to prosecution, and if convicted, face civil and criminal penalties. In addition, in the 4 years since the Mexican Hass avocado import program began, APHIS believes that only 0.11 percent of the boxes of imported Mexican avocados were shipped outside the approved distribution area.

Based on these figures, APHIS believes that the chance that imported Mexican Hass avocados could be moved to nonapproved States is very remote. Further, even if imported Hass avocados were moved to nonapproved areas, it is even more unlikely that they would contain pests. The National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. 4321 *et seq.*) does not require consideration of remote and speculative risks in the development of an environmental assessment. Therefore, we see no need to revise our environmental assessment.

Comment: San Diego County, CA, has the highest number of threatened or endangered species of any county in the United States. The county has a large number of growers who practice

integrated pest management, and has in excess of 300 registered organic agricultural producers. The potential impact of increased pesticide use resulting from an eradication program in the county would be tremendous. The environmental assessment should take these impacts into consideration.

Response: The concern of environmental impacts on threatened and endangered species was noted in the preparation of the environmental assessment as it applies to the proposed rule for the Mexican Hass avocado import program expansion and its limited distribution area. San Diego County is not listed as one of the distribution areas in the proposed rule and, therefore, was not considered in assessing environmental impacts to threatened and endangered species. If, in the future, APHIS proposes to include San Diego County, an environmental assessment or environmental impact statement (EIS) would be required to address all environmental issues, including threatened and endangered species.

Comment: Executive Order 12898 requires that in complying with NEPA, agencies shall include an analysis of environmental effects, including health, economic, and social factors. APHIS's environmental assessment does not meet NEPA requirements in that it does not consider economic or social factors.

Response: Section 1508.9(a) of NEPA states, in part, that an environmental assessment is a concise public document that serves to "(1) [b]riefly provide sufficient evidence for determining whether to prepare an environmental impact statement; (2) [a]id an agency's compliance with the [National Environmental Policy] Act when no environmental impact statement is necessary, and (3) [f]acilitate preparation of a statement when one is necessary." Because an environmental assessment is a concise document, it should not contain lengthy descriptions of information gathered for the environmental assessment. The analysis in the environmental assessment considered the potential for effects on the natural and physical environment from the proposed action and also, in accordance with Executive Order 12898, the potential for disproportionate human health effects on low-income populations and minority populations from the proposed action. The analysis concluded that the expansion of the distribution of Hass avocados will not result in adverse human health or environmental effects.

Section 1508.14 of NEPA specifies "when an environmental impact statement is prepared and economic or

social and natural and physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment." Therefore, an environmental assessment is not required to discuss social and economic impacts of a proposed action; however if, after the analysis is completed for an environmental assessment, the decisionmaker cannot arrive at a finding of no significant impact, then it would be appropriate to consider social and economic factors, as they interrelate with the natural and physical environmental effects, in the EIS.

Comment: The first environmental assessment for the Mexican Hass avocado import program provided for the establishment of the program based upon a scientific assessment of pest biology, host range, and climatic factors. The current assessment discounts the science of the initial environmental assessment and eliminates the no action alternative based on trade issues. Where does APHIS provide the information required by NEPA for discussing elimination of the no action alternative?

Response: The environmental assessment considered three alternatives for the proposed action: (1) Change the Fruits and Vegetables regulations to add 12 States to the distribution area and extend the shipping season by 2 months (March and April),⁵ (2) no action, which would not change the current distribution area or months of distribution, and (3) change the Fruits and Vegetable regulations to expand the distribution to all 50 States and the District of Columbia and provide for year-round distribution. Alternative 3 was dismissed from further consideration because of the risks associated with possible establishment of quarantine pests, as determined by pest risk assessment. Alternative 2 (no action) was dismissed from further consideration because (1) pest risk assessment documents produced by APHIS found that the risk posed by expanded importation of Mexican Hass avocados is negligible, and (2) under international trade agreements, APHIS is obligated to allow the importation of commodities if their importation presents a negligible risk of pest introduction. This information is stated on page 3 of the environmental assessment.

Comment: The consequences of introducing a new pest into the United States are not adequately addressed in

the environmental assessment, and the assessment's conclusion that "the risk to the quality of the human environment [under the program expansion] is insignificant" is incorrect. A full environmental impact statement should be prepared.

Response: The environmental assessment considers, refers to, and incorporates by reference the risk assessment and subsequent documents updating the assessment that were prepared specifically for the importation of Mexican Hass avocados and analysis of selected pathways. The environmental assessment also incorporates by reference the Sequeira, *et al.* study, which assesses the risk associated with the establishment of *Anastrepha ludens* fruit flies in the United States, especially in relation to these pests as they occur in U.S. avocado imports from Mexico. The study used the following approach factors to determine the pest risks: (1) Examine the resource at risk (commercial fruit production), (2) characterize host susceptibility (timing and location of susceptible fruit), and (3) characterize climatology for the purpose of studying pest reproduction potential as a function of the previous factors. The study also used the avocado pathway as a case study for the risks associated with fruit imports. In determining the probability that fruit flies are getting through undetected along the pathway, the case study used evidence from ongoing sampling and recorded information since the initiation of the avocado export program.

Epidemiologically, the Sequeira, *et al.* study concludes that both the Hass avocado's status as a poor to inadequate host and marginal developmental conditions lead to low production area fruit fly densities. According to the statistical findings of the study, the probability that fruit fly infestations—even very low-level infestations—remain undetected in inspections under the current export program is close to zero.

Based on the findings of these scientific assessments, increased imports of Hass avocados from Michoacan, Mexico, will not significantly impact the human environment; thus, the preparation of an EIS is not required for this proposed action.

Miscellaneous

Under the regulations, imported Mexican Hass avocados must be packed in clean, new boxes that are clearly marked with the identity of the grower, packinghouse, and exporter, and a

statement listing the States in which distribution of the avocados is prohibited. In this document, we are revising the regulations to allow imported Mexican Hass avocados to, alternatively, be packed in clean plastic reusable crates. The clean plastic reusable crates will be required to be marked with the same information as is required on clean new boxes. We are making this change because it could reduce unnecessary waste while continuing to provide that imported Mexican avocados are packaged in boxes that, in and of themselves, do not present a risk of introducing fruit flies or other plant pests into the United States.

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**.

We are taking 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.

Immediate implementation of this rule is necessary to provide relief to those persons who are adversely affected by restrictions we no longer find warranted. Under the regulations, the shipping season for Mexican Hass avocados begins October 15, 2001. Making this rule effective immediately will allow interested persons to begin shipping Hass avocados to certain areas of the United States as soon as possible after that date. Therefore, the Administrator of the Animal and Plant Health Inspection Service has determined that this rule should be effective less than 30 days after publication.

Executive Order 12866 and Regulatory Flexibility Act

This 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 rule, we have prepared a regulatory impact analysis. The regulatory impact analysis also contains a final regulatory flexibility analysis, which considers the potential economic effects of this final rule on small

⁵ The environmental assessment has since been revised to reflect the change in the shipping season described earlier in this document.

entities, as required under 5 U.S.C. 604. 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/>.

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 February. Under this final rule, distribution will 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 will also be expanded to run from October 15 through April 15.

We are taking 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 will 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 final rule is expected to have a similar effect. Anecdotal evidence suggests that benefits resulting from the previous regulations 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 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 the benefits and costs of the final rule. Potential producer losses and consumer/merchandise 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 \$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/merchandise 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. 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 sum, impacts of the final 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, but the net impact remains positive. 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 Final 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. 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), 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 modifications to the rule that would mitigate adverse impacts on small-entity California Hass avocado producers. Alternative A would extend the 4-

month period of import by 2 months, March and April, but would not expand the number of approved States.

Alternative B would maintain the current 4-month period of import, but would expand the number of approved States. For both alternatives, losses to California's Hass avocado producers would be less than were 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 million per year for the proposed rule.

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

This final rule contains information collection requirements, which have been approved by the Office of Management and Budget (see "Paperwork Reduction Act" below).

Executive Order 12988

This final rule allows Hass avocados to be imported into certain areas of the United States from Michoacan, Mexico. State and local laws and regulations regarding Hass avocados imported under this rule will be preempted while the fruit is in foreign commerce. Fresh Hass avocados are generally imported for immediate distribution and sale to the consuming public, and 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. 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 and finding of no significant impact have been prepared for this final rule. The assessment provides a basis for the conclusion that the importation of Hass avocados from Mexico under the conditions specified in this rule will not present a risk of introducing or disseminating plant pests and will not have a significant impact on the quality of the human environment. Based on the finding of no significant impact, the Administrator of the Animal and Plant Health Inspection Service has

determined that an environmental impact statement need not be prepared.

The environmental assessment and finding of no significant impact were 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's NEPA Implementing Procedures (7 CFR part 372).

Copies of the environmental assessment and finding of no significant impact 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 individual listed under **FOR FURTHER INFORMATION CONTACT**, and on the Internet at: <http://www.aphis.usda.gov/ppq/avocados/>.

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 0579-0129.

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 are amending 7 CFR part 319 as follows:

PART 319—FOREIGN QUARANTINE NOTICES

1. The authority citation for part 319 continues 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 is 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 words "November through February" each time they appear and adding the words "October 15 through April 15" in their place.

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

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

Fresh Hass variety avocados (*Persea americana*) may be imported from Michoacan, 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 between October 15 and April 15 of the following year; 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, or clean plastic

reusable crates. The boxes or crates must be clearly marked with the identity of the grower, packinghouse, and exporter, and the statement "Not for distribution in AL, AK, AZ, AR, CA, FL, GA, HI, LA, MS, NV, NM, NC, OK, OR, SC, TN, TX, WA, Puerto Rico, and all other U.S. Territories."

* * * * *

(f) * * *

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

* * * * *

(g) *Shipping areas.* (1) Except as explained below in paragraph (g)(3) 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) 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 above in this paragraph.

* * * * *

(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 29th day of October 2001.

James G. Butler,

Acting Under Secretary for Marketing and Regulatory Programs, USDA.

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