DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

[Docket No. APHIS-2014-0005]

Decision to Authorize the Importation of Fresh Citrus From China Into the Continental United States

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice.

SUMMARY: We are advising the public of our decision to authorize the importation of five species of commercially produced fresh citrus fruit (pummelo, Nanfeng honey mandarin, ponkan, sweet orange, and Satsuma mandarin) from China into the continental United States. Based on the findings of the pest risk analysis, which we made available to the public to review and comment through a previous notice, we have concluded that the application of one or more designated phytosanitary measures will be sufficient to mitigate the risks of introducing or disseminating plant pests or noxious weeds via the importation of these five species of citrus fruit from China.

DATES: The articles covered by this notification may be authorized for importation after [Insert date of publication in the Federal Register].

FOR FURTHER INFORMATION CONTACT: Ms. Claudia Ferguson, Senior Regulatory Policy Specialist, Regulatory Coordination and Compliance, PPQ, APHIS, 4700 River Road Unit 133, Riverdale, MD 20737-1236; (301) 851-2352.
SUPPLEMENTARY INFORMATION: Under the regulations in “Subpart L—Fruits and Vegetables” (7 CFR 319.56-1 through 319.56-12, referred to below as the regulations), the Animal and Plant Health Inspection Service (APHIS) prohibits or restricts the importation of fruits and vegetables into the United States from certain parts of the world to prevent plant pests from being introduced into and spread within the United States.

Section 319.56-4 of the regulations contains a notice-based process based on established performance standards for authorizing the importation of fruits and vegetables. The performance standards, known as designated phytosanitary measures, are listed in paragraph (b) of that section. Under the process, APHIS proposes to authorize the importation of a fruit or vegetable into the United States if, based on the findings of a pest risk analysis, we determine that the measures can mitigate the plant pest risk associated with the importation of that fruit or vegetable. APHIS then publishes a notice in the Federal Register announcing the availability of the pest risk analysis that evaluates the risks associated with the importation of that fruit or vegetable.

In accordance with that process, we published a notice¹ in the Federal Register on May 1, 2019 (84 FR 18474-18475, Docket No. APHIS-2014-0005), in which we announced the availability, for review and comment, of a pest risk assessment (PRA) that evaluated the risks associated with the importation into the continental United States of five species of commercially produced citrus fruit from China into the continental United States. These citrus fruits were: *Citrus grandis* (L.) Osbeck cv. Guanximiyou, referred to in this document as pummelo; *Citrus kinokuni* Hort. ex Tanaka, referred to in this document as Nanfeng honey mandarin; *Citrus poonensis* Hort. ex Tanaka, referred to in this document as ponkan; *Citrus sinensis* (L.) Osbeck,

¹ To view the notice, PRA, RMD, supporting documents, and the comments that we received, go to http://www.regulations.gov/#!docketDetail;D=APHIS-2014-0005.
referred to in this document as sweet orange; and *Citrus unshiu* Marcov., referred to in this document as Satsuma mandarin.

In the notice, PRA, and RMD published previously, we referred to *Citrus grandis* (L.) Osbeck cv. Guanximiyou, as pomelo; however, the preferred spelling of the common name for this fruit is pummelo. We have corrected the spelling in this document and in our revised RMD.

The PRA identified the following 15 quarantine pests as potentially following the pathway on the importation of these citrus species from China into the continental United States: The mites *Brevipalpus junicus* and *Tuckerella knorri*; the fruit flies *Bactrocera correcta*, *B. cucurbitae*, *B. dorsalis*, *B. minax*, *B. occipitalis*, *B. pedestris*, *B. tau*, and *B. tsuneonis*; and the moths *Carposina niponensis*, *C. sasakii*, *Ostrinia furnacalis*, *Cryptoblakes gnidiella*, and *Rosseliella citrifrugis*.

The PRA also identified *Xanthomonas citri*, the causal agent of citrus canker, and *Phyllosticta citricarpa*, the causal agent of citrus black spot, as existing in China. These pathogens, present in the United States, are considered quarantine pests since they have limited distribution and are under official control in the United States.

Based on the conclusions of the PRA, APHIS prepared a risk management document (RMD) recommending mitigations for the 15 quarantine pests and 2 pathogens the PRA had identified as potentially following the pathway on the importation of citrus from China into the continental United States.

We solicited comments on the PRA and RMD for 60 days ending on July 1, 2019. We received 11 comments by that date. They were from the national plant protection organization (NPPO) of China, the NPPO of Ghana, two State departments of agriculture, four organizations representing domestic citrus producers, a domestic citrus producer, and private citizens.
The issues raised by the commenters are addressed below, by topic.

General Comments

Several commenters requested that we retain our prohibition on the importation of citrus from China into the United States.

As a signatory to the World Trade Organization's Agreement on Sanitary and Phytosanitary Measures (SPS Agreement), the United States has agreed that any prohibitions it places on the importation of fruits and vegetables will be based on scientific evidence, and will not be maintained without sufficient scientific evidence. The PRA and RMD that accompanied the initial notice demonstrated scientific evidence in support of removing the prohibition in favor of our proposed systems approach.

The NPPO of China requested that this notice authorize the importation of all species of citrus from China into the continental United States, rather than just pummelo, Nanfeng honey mandarin, ponkan, sweet orange, and Satsuma mandarin.

If a fruit is not currently authorized for importation into the United States, the process for requesting its authorization, and the information required of such a request, are specified in 7 CFR 319.5. The NPPO only submitted information pursuant to this process for those five species. Accordingly, the PRA only identified quarantine pests of concern that could follow the pathway of importation for those five species, and the mitigations in the RMD were only developed for those five species. We note, in this regard, that the plant pest risk can increase or decrease from species to species within a genus, and the plant pest risk associated with one species should not necessarily be considered indicative of the plant pest risk associated with another species. For these reasons, we cannot grant the NPPO’s request for importation of all citrus from China.
Several commenters stated that the NPPO of China could not be trusted to abide by the systems approach. The commenters cited multiple instances where goods exported from China did not meet U.S. conditions for importation.

Like APHIS, the NPPO of China is also a signatory to the SPS Agreement. As such, it has agreed to respect the phytosanitary measures the United States imposes on the importation of plants and plant products from China when the United States demonstrates the need to impose these measures in order to protect plant health within the United States. The PRA that accompanied the notice provided evidence of such a need. That being said, all consignments of citrus fruit from China will be inspected at ports of entry into the United States for quarantine pests. If consignments are determined to be infested, they will be subject to appropriate remedial measures to address this plant pest risk, and APHIS will evaluate whether remedial measures are warranted for the export program itself.

A commenter stated that the only appropriate mitigation for the importation of pummelo, Nanfeng honey mandarin, ponkan, sweet orange, and Satsuma mandarin is fumigation with methyl bromide.

For the reasons specified in the RMD and this final notice, we have determined that mitigations other than fumigation with methyl bromide address the insects of quarantine significance that could follow the pathway on the importation of citrus from China.

A commenter stated that the wooden pallets on which citrus from China would be shipped could also be infested with plant pests. The commenter stated that pallets from China often are infested with plant pests.

APHIS requires all wood packaging material imported into the United States from countries other than Canada to be treated in accordance with 7 CFR part 305, which contains
APHIS’ regulations governing phytosanitary treatments. All wood packing material accompanying consignments of plants or plant products that are imported into the United States is inspected at ports of entry for compliance with these regulations, as well as for evidence of quarantine pests.

Finally, a commenter stated that the mitigations APHIS proposed for the importation of citrus from China were significantly less stringent than the import requirements for apples and sand pears from China, even though the number of quarantine plant pests that could potentially follow the pathway on the importation of citrus from China, and their severity, was greater than the pest complex associated with either of these two commodities.

The commenter’s stated assumption for this assertion was that bagging of fruit, which is required for both apples and sand pears, is a more stringent mitigation than production of fruit in an area of low pest prevalence (ALPP), as determined by APHIS. This is incorrect. The requirement for pest-free areas or pest-free places of production (PFPPs) that will be used for Bactrocera minax and B. tsuneonis are very restrictive requirements. Pest-free areas and PFPPs require adherence to appropriate trapping guidelines, having buffer areas, requirements for field treatments if flies are trapped, and restrictions on exports if flies are trapped. For a pest-free area and for PFPPs, China will have to follow the appropriate international standards for phytosanitary measures (ISPMs) including ISPM No. 4 “Requirements for the establishment of pest-free areas,” ISPM No. 8 “Determination of pest status in an area,” ISPM No. 10 “Requirements for the establishment of pest-free places of production and pest free production sites,” ISPM No. 22 “Requirements for the establishment of areas of low pest prevalence,” ISPM No. 26 “Establishment of pest-free areas for fruit flies (Tephritidae),” and ISPM No. 29 “Recognition of pest-free areas and areas of low pest prevalence.” APHIS will require bagging
for pummelos and appropriate commodity treatments for other citrus for *Bactrocera dorsalis* and several other *Bactrocera* species. APHIS points out that no fruit flies have ever been intercepted in commercial shipments of fruit from China, whether bagged (pears) or cold treated (litchi and longans). APHIS believes that the measures proposed for China citrus will provide equivalent measures of protection as the measures currently required for apples and pears from China.

Comments Regarding Pest Risk

Several commenters stated that the plant pest risk associated with the importation of citrus from China into the continental United States was too great.

For the reasons set forth in the RMD that accompanied our initial notice, the initial notice itself, and this final notice, we have determined that measures exist which can mitigate this plant pest risk.

A commenter expressed concern that the importation of citrus from China could serve as a pathway for the introduction of Asian citrus psyllid, the primary vector of citrus greening, into the continental United States.

In order for us to consider a consignment of citrus from China to be commercially produced, it must be, among other things, washed, brushed, and disinfected during packinghouse procedures. We consider washing and brushing sufficient to remove Asian citrus psyllid, a surface feeder, from citrus fruit intended for export to the United States.

Two commenters expressed concern that the importation of citrus from China could serve as a pathway for the introduction of citrus greening into the continental United States.

Citrus greening is primarily vectored by Asian citrus psyllid; fruit is not considered by APHIS to be an epidemiologically significant pathway. As we explained above, we consider packinghouse procedures sufficient to remove Asian citrus psyllid from citrus fruit intended for
export to the United States. Commercially produced and packed fruit itself is not an epidemiologically significant pathway for the transmission of citrus greening, and we do not regulate it domestically.

Two commenters expressed concern that the importation of citrus from China could serve as a pathway for the introduction of citrus black spot into the continental United States.

Commercially produced and packed fruit is not an epidemiologically significant pathway for the transmission of citrus black spot. Nonetheless, for the sake of consistency with APHIS’ domestic regulations regarding citrus black spot, all citrus fruit intended for export to the continental United States from China must be surface disinfected and also fungicide treated. This will further reduce the citrus black spot risk.

Several commenters expressed concern that the importation of citrus from China could serve as pathway for the introduction of two species of fruit fly, *Bactrocera minax* and *B. tsuneonis*, into the United States.

APHIS believes that the systems approach proposed will prevent both *B. minax* and *B. tsuneonis* from following the pathway of China citrus to the continental United States. The systems approach requires that all places of production exporting to the United States must be from approved PFPPs for *B. minax* and *B. tsuneonis*. APHIS and the NPPO of China will jointly agree to the process for approval of PFPPs within the context of development of the operational workplan.

Comments on the Pest Risk Assessment

As noted above, the PRA identified eight species of fruit fly, *Bactrocera correcta*, *B. cucurbitae*, *B. dorsalis*, *B. minax*, *B. occipitalis*, *B. pedestris*, *B. tau*, and *B. tsuneonis*, as
quarantine pests that occur in China and that could follow the pathway of the importation of citrus from China into the continental United States.

The NPPO of China stated that another fruit fly, *B. orientalis*, was included in the notice as a quarantine pest that exists in China and could follow the pathway of the importation of citrus from China into the continental United States. The commenter stated that they are not aware that such a species exists, and that this was likely a typographical error.

The reference in the notice was such an error, and should have referred to *B. occipitalis*.

The NPPO of China also stated that *B. occipitalis* does not exist in China.

In compiling the PRA, APHIS found four references reporting the occurrence of this species of fruit fly in China. The NPPO did not provide any evidence that suggests the references were in error.

The NPPO of China also stated that APHIS had overstated the economic consequences of the introduction of *B. occipitalis* into the United States, and cited an article in support of their position.²

*Doorenweerd et al.* states that the pest status of *B. occipitalis* is uncertain and “may possibly have been overrated based on a few obscure rearing records cited in” a 1994 article.³

While we agree that *B. occipitalis* is not as economically significant a pest as some other species in the *B. dorsalis* complex to which it belongs, we disagree with *Doorenweerd et al.* that its pest status is uncertain. As we mentioned in the PRA that accompanied the initial notice, fruit

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flies in *B. dorsalis* complex have proven to be major pests where introduced, and the United States has climates that are hospitable to their introduction. We note, moreover, that the PRA derived its rating for *B. occipitalis* from references other than *Drew and Hancock*; one of these references predates *Drew and Hancock*,\(^4\) while another is a technical document drafted by the NPPO of China itself.\(^5\)

For these reasons, we are maintaining *B. occipitalis* as a quarantine pest that could follow the pathway on citrus from China imported into the continental United States.

Finally, the NPPO of China suggested that, because the taxonomy of *B. pedestris* is uncertain, it should not be considered a quarantine pest that could follow the pathway on citrus imported into the continental United States.

While the taxonomy of *B. pedestris*, like that of many species in the *B. dorsalis* complex, is somewhat uncertain, the complex is considered to be of quarantine significance. We also found multiple references indicating that it is a unique species within the complex that occurs in China, and the NPPO of China provided no trapping records or technical information contradicting these references.

For these reasons, we are maintaining *B. pedestris* as a quarantine pest that could follow the pathway on citrus from China imported into the continental United States.

One commenter suggested that the PRA had underestimated the risk associated with citrus greening, citrus canker, citrus yellowing, and *Phyllosticta* spp. The commenter stated


climate change has created anomalies in temperature and rainfall within the United States that are more conducive to the establishment of these pathogens. The commenter was particularly concerned that we had mischaracterized the likelihood of establishment of the pathogens in the State of California.

Changes in climate within the United States pertain to likelihood of establishment, if a pathogen is introduced, and are not germane to whether commercially produced and packed fruit is an epidemiologically significant pathway for the introduction of the pathogen. Commercially produced and packed fruit which has been surface disinfected and treated with fungicide, is an epidemiologically insignificant pathway for the introduction of citrus greening, citrus canker, and *Phyllosticta* spp.

We found no evidence that citrus yellowing is a different disease than citrus greening; in our literature review, these names were used interchangeably to describe the disease.

One commenter noted that, in the PRA, *Phyllosticta citrichinaensis* was not considered a quarantine pest that could follow the pathway on the importation of citrus from China into the continental United States. The commenter pointed out that the PRA’s discussion of *P. citrichinaensis* cites two articles⁶ in support of this conclusion, but stated that one of these articles appears to suggest that commercially produced and packaged fruit is a pathway for *P. citrichinaensis*, while the other article is silent on the matter. The commenter suggested that APHIS had disregarded the former article and given undue weight to that the latter article’s

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silence. The commenter stated that APHIS should not allow the importation of citrus from China without further analysis of *P. citrichinaensis* transmissibility.

*Wang et al.*, the former article cited in the PRA, discusses finding spots associated with *P. citrichinaensis* on commercially produced and packaged fruit, without the presence of pycnidia, or asexual fungal fruiting bodies. Pycnidia do not play a significant role in the disease cycle for *Phyllosticta* spp.; ascospores, the sexual stage of the fungus, which are associated with plant parts other than fruit, are the primary means of transmission. Transmission via pycnidia to a new host would take a very unlikely confluence of events. Jointly, these two facts form the primary basis for why we consider commercially produced and packed fruit to be an epidemiologically insignificant pathway for the transmission of *P. citricarpa*, which can result in pycnidia, but not ascospores, on fruit. However, for asymptomatic fruits, the likelihood that it will serve as a pathway of transmission of a *Phyllosticta* species to new hosts is even lower. It follows that commercially produced and packaged fruit is an even less viable pathway for the transmission of *P. citrichinaensis* than it is for *P. citricarpa*.

The same commenter stated that the PRA had overlooked a 2018 doctoral thesis on the transmission of *P. citrichinaensis*.

We were unable to find a 2018 thesis with the title cited by the commenter. We were able to find a 2017 thesis with such a title; however, this thesis primarily focuses on *P. citricarpa*, and its one reference to *P. citrichinaensis* cites *Wang et al*. As we mentioned in the above response, *Wang et al.* does not suggest that commercially produced and packaged fruit is an epidemiologically significant pathway for the transmission of *P. citrichinaensis*.

The same commenter stated that elements of the risk rating in the PRA for *Carposina niponensis* and *C. sasakii* were in error. The commenter stated that, in the risk rating, APHIS
had assigned a medium likelihood of the pests surviving post-harvest processing, and a medium likelihood of the pests surviving post-harvest transport and storage, but had cited no information in support of that assumption. The commenter stated that, in the absence of information, a high rating should be assigned to these elements.

We agree and have revised the PRA accordingly.

The same commenter stated that this revision should change the overall rating for *C. niponensis* and *C. sasakii* from Medium to High.

APHIS’ risk ratings are multiplicative, rather than additive. Because other elements of the risk rating for *C. niponensis* and *C. sasakii* remain Medium, the overall rating remains Medium.

The same commenter stated that APHIS’ overall risk ratings for pests should be additive, rather than multiplicative, and a single risk element that we rate High should make the overall rating High.

Such an approach would result in ratings that distort the actual pest risk associated with a given pathway. For example, a pest that would have High likelihood of establishment, but a Low likelihood of entry would receive a Medium likelihood of introduction under our approach (it would receive a High rating under the commenter’s approach). We have been using the multiplicative approach since 2012. This approach gives us a more accurate assessment of the risk associated with a particular pest and allows program managers to assign the appropriate risk mitigation measures that are technically and scientifically justified for the pests identified in the PRA. Therefore, we do not agree with the commenter’s suggested change.

A commenter stated that the PRA should be revised to reevaluate the likelihood that *Brevipalpus junicus* (*B. junicus*) could be introduced and become established in California.
The PRA already identifies California as a State in which \textit{B. junicus} could become established, if introduced. We are uncertain what further revisions are requested by the commenter.

The same commenter stated that PRA should be revised to reevaluate the consequences of \textit{B. minax} or \textit{B. tsuneonis} establishment in California. The commenter stated that these pests are difficult to detect, and there are no effective control options once they become established.

In the PRA, we determined that both \textit{B. minax} and \textit{B. tsuneonis} would have unacceptable consequences (the highest rating a pest can receive for the Consequences portion of a risk rating) if introduced into and established within the United States. Reevaluating this element relative to the consequences of establishment in California would not change the element’s rating.

Comments Regarding the Risk Management Document

In the RMD that accompanied the initial notice, we proposed a systems approach, or combination of mitigation measures, for addressing the risk associated with the importation of citrus from China into the continental United States. The proposed measures were:

- Importation in commercial consignments only.
- Registration of places of production and packinghouses with the NPPO of China.
- Certification by the NPPO of propagative material used at places of production as being free of quarantine pests.
- Periodic inspections of places of production throughout the shipping season.
- Grove sanitation.
- PFPPs for \textit{Bactrocera minax} and \textit{B. tsuneonis}.
- PFPPs for \textit{B. correcta}, \textit{B. cucurbitae}, \textit{B. dorsalis}, \textit{B. occipitalis}, \textit{B. pedestris}, and \textit{B. tau}; or determination that places of production are located in areas of low pest
prevalence for these species of fruit fly based on trapping, and in-transit cold treatment as an additional phytosanitary safeguard; except for pummelo which requires bagging.

- Maintaining the identity and origin of the lot of fruit throughout the export process to the United States.
- Safeguarding of harvested fruit.
- Post-harvest visual inspection of fruit by the NPPO or officials authorized by the NPPO according to a biometric sample.
- Cutting a portion of the fruit in the sample to inspect for quarantine pests.
- Washing, brushing, and treatment with surface disinfectant and fungicide.
- Issuance of a phytosanitary certificate with an additional declaration.
- Port of entry inspections.
- Importation under a permit issued by APHIS.
- Possible remedial measures in the event of detection of quarantine pests at registered places of production or packinghouses, or in/on consignments of citrus fruit from China at ports of entry into the United States.

A commenter stated that the systems approach was overly complex and dependent on many actions taken in China without APHIS oversight, and would be difficult to implement and maintain.

We disagree with the commenter’s assertion that the complexity of a systems approach is correlated with its ability to be implemented and maintained. For systems approaches, APHIS has long relied on operational workplans, which sets forth in detail the day-to-day activities that the NPPO of the exporting region, and growers, packinghouses, and persons commercially
involved in chain of production of the commodity must undertake in order to implement and maintain the systems approach. APHIS and NPPO of the exporting region must jointly approve all such workplans, and APHIS reserves the right to monitor implementation of the operational workplan as well as activities specified within the operational workplan. We have successfully relied on operational workplans in order to implement and monitor several complex systems approaches, such as that for Hass avocadoses from Mexico and lemons from Argentina.

In requirement 2 of the RMD, we stated that we would be directly involved in monitoring and auditing the implementation of the operational workplan. A commenter interpreted this to mean that, following implementation, the NPPO of China would assume responsibility for monitoring ongoing adherence to the operational workplan by Chinese producers, packinghouses, and other persons commercially involved in the chain of production. The commenter expressed concern that the NPPO of China would continue to do so.

Following initial implementation of operational workplan, the NPPO of China will assume primary responsibility for monitoring adherence to the workplan by parties within China. We consider this to be consistent with the International Plant Protection Convention’s (IPPC) ISPM No. 35, “Systems approach for pest risk management of fruit flies (Tephritidae),” which both the United States and China have adopted as members of the IPPC. The ISPM recommends that the NPPO of the exporting country assume responsibility for monitoring an operational workplan developed as part of a systems approach for fruit flies.

That being said, we will inspect all consignments of citrus from China for quarantine pests at ports of entry in the United States, as well as for adherence the provisions of the systems

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approach. As stated in the RMD, if we detect quarantine pests on consignments of citrus from China, we will conduct an investigation and may prohibit the further importation of citrus from the place of production or province where the citrus was produced until we and the NPPO of China jointly agree that appropriate remedial measures have been put in place. Deviations from the systems approach that are detected at a port of entry may also result in heightened APHIS oversight of the export program for citrus from China to the United States, or similar remedial actions to detection of a quarantine pest. This approach is consistent with general APHIS policy regarding systems approaches.

A commenter stated that we had provided no indications that Chinese producers and packinghouses can follow a complex systems approach.

As we mentioned above, one of the purposes of an operational workplan is to set forth the day-to-day activities that growers and packinghouses must undertake in order to implement and monitor the requirements of an APHIS systems approach. APHIS will not agree to an operational workplan until we consider these day-to-day activities to be sufficiently delineated for growers and packinghouses.

The same commenter suggested that APHIS maintain direct oversight in China of the export program for citrus to the United States for the first 2 years of the program until it establishes a “track record” of clean shipments.

This would be tantamount to mandating a preclearance program for the importation of citrus from China to the continental United States during that 2-year time period. To date, we have only required such preclearance when detections of quarantine pests on a commodity at ports of entry in the United States have been frequent enough to suggest that the exporting country may be experiencing a regulatory failure of the export program for the commodity.
A commenter stated that China has historically done a poor job of monitoring export programs for commodities to the United States, and stated that this suggests the NPPO of China is unlikely to meaningfully monitor the export program for citrus to the United States.

As a signatory to the SPS Agreement, China has agreed to respect the phytosanitary measures the United States imposes on the importation of plants and plant products from China when the United States demonstrates the need to impose these measures in order to protect plant health within the United States; as a country that has implemented ISPM No. 35, China has similarly agreed to monitor continual adherence to systems approaches for fruit flies that are associated with its export programs. We will, however, inspect all consignments of citrus from China at ports of entry in the continental United States for quarantine pests, and will conduct an investigation to determine appropriate remedial actions if any such quarantine pests are detected.

In requirement 6 of the RMD, we specified that all propagative material introduced into registered places of production would have to be certified free of quarantine pests.

The NPPO of Ghana stated that they are unaware of a certification protocol for freedom of fruit flies for propagative material.

Within the context of the RMD, we believe it was clear that the certification would be for quarantine pathogens, particularly pathogens with latency periods, rather than fruit flies. Regardless of instar, fruit flies are easily detectable on propagative material; fruit is the primary host of such fruit flies.

In requirement 8 of the RMD, we specified that all production sites exporting to the United States would have to be approved PFPPs for Bactrocera minax and B. tsuneonis.

A commenter stated that B. minax is widely prevalent in China, and the PRA had provided no indication that producers have adopted practices to suppress the population density
of *B. minax* in places of production. The commenter questioned how APHIS had therefore determined that PFPPs for *B. minax* exist in China.

We disagree with the commenter’s assertion that *B. minax* is widely prevalent in China such that PFPPs do not exist; in fact, about half of Chinese citrus production occurs outside of the current range of *B. minax*. Additionally, in areas where *B. minax* is known to occur, populations have been found primarily in hilly regions.

The same commenter stated that the distribution of *Bactrocera* spp. in an affected area tends to be very dynamic, and asked how APHIS would stay continually abreast of the current distribution of *B. minax* and *B. tsuneonis* in China.

APHIS will require continual surveillance for fruit flies through trapping protocols in order to determine the presence or absence of *B. minax* and *B. tsuneonis* in a place of production that wishes to participate in the export program for citrus to the United States.

A commenter pointed out that, in one instance, the RMD referred to pest-free areas for *B. minax* and *B. tsuneonis*, and asked whether APHIS would require pest-free areas or PFPPs for these pests.

The lone reference in the RMD to pest-free areas used the term broadly to refer to any geographical area, including a place of production, that has been determined to be free of a plant pest, rather than the technical sense of that term. The requirement will be for PFPPs, rather than pest-free areas.
Several commenters cited an article\textsuperscript{8} that, they stated, indicated that there is not an effective lure for \textit{B. minax}. The commenters questioned how the NPPO would conduct surveillance for \textit{B. minax} in the absence of such a lure.

\textit{Xia et al.} states that the most common kairomone lures for \textit{Bactrocera} spp., cuelure and methyl eugenol, are not attractive for \textit{B. minax}, and questions the efficacy of the most common homemade lures producers have employed: Hydrolyzed protein, sugar and vinegar mixture, and waste brewer’s yeast. \textit{Xia et al.} does not foreclose the possibility that hydrolyzed protein could be used as a lure for \textit{B. minax}, noting that, even in homemade usage, it was “the most effective lure.”

APHIS and other countries have found that protein baits may be used reliably to trap for fruit flies in the absence of species-specific lure; the absence of the lure is accounted for by adjusting the trapping protocol itself, such as by increasing trap density and servicing. This approach is evidenced in the trapping protocols used extensively throughout Central and South America for \textit{Anastrepha} spp., and in the trapping protocol used in Japan for \textit{B. tsuneonis}.

The same commenters stated that \textit{Xia et al.} had indicated that there is no effective lure for early detection of and emergency response for \textit{B. minax}.

Contextually, \textit{Xia et al.} refers to the absence of a long-range kairomone lure that could be used within the United States to detect a small population of \textit{B. minax} that might have been introduced into the United States through a non-commercial means, such as smuggled fruit or passenger baggage. This is not germane to whether a protein-based trap could be used as part of an extensive trapping protocol to survey for \textit{B. minax} in a geographical area.

\textsuperscript{8} Xia, Y., Ma, X.L., Hou, B.H. and Ouyang, G.C. (2018). \textit{A Review of Bactrocera minax (Diptera: Tephritidae) in China for the Purpose of Safeguarding}. Advances in Entomology, 6, 35-61. Referred to in the body of this document as \textit{Xia et al.}. 
The same commenters stated that Xia et al. questions the efficacy of trapping in determining PFPPs and areas of low pest prevalence for B. minax within China.

Xia et al. does state that “determining B. minax pest-free areas in China can be especially challenging” and also states that “trapping for this species is not very effective.” However, Xia et al. reaches this conclusion by evaluating the lures currently in use within China. We agree that the lures currently used in China are of limited efficacy in trapping for B. minax. However, we disagree with Xia et al. that trapping for this species, regardless of how it is conducted, would prove to be ineffective. As we noted above, there is extensive evidence that protein baits may be used reliably to trap for fruit flies in the absence of species-specific lure. Finally, we note that Xia et al. recommends biometric sampling at packinghouses, including fruit cutting, as a means of verifying that a place of production is free of B. minax, and such biometric sampling and fruit cutting is part of the systems approach.

Several commenters pointed out that Xia et al. recommends that APHIS follow international standards in recognizing pest-free areas and ALPPs for B. minax.

We have followed international standards in recognizing pest-free areas and ALPPs, and will continue to do so.

Several commenters stated that, in the absence of a species-specific lure, trapping cannot be used to determine the prevalence of a Bactrocera species reliably enough to use it as a phytosanitary measure. One commenter compared trapping for a Bactrocera species without a male lure to trapping for Asian citrus psyllid (ACP) that is conducted within the United States using panel traps. The commenter stated that the detection of a single psyllid in the traps is usually an indicator of a much larger established population.
We disagree that trapping cannot be used reliably to determine the prevalence of a *Bactrocera* species in the absence of species-specific lure. There is extensive evidence that protein baits may be used reliably to trap for fruit flies in the absence of species-specific lure, and Japan has used such protein baits effectively to trap for *B. tsuneonis*.

We also disagree that the comparison made by the commenter is biologically appropriate. The traps used domestically for ACP rely on ACP’s short distance attraction to color. In contrast, *Bactrocera* spp. rely on protein to produce eggs as part of the mating cycle and are attracted to the odor of protein for this reason.

One commenter asked if one trap and lure will be used for all *Bactrocera* species that exist in China.

The trap used will vary from species to species, depending on the existence of a species-specific lure for that species.

The same commenter asked which traps and lures would be used.

APHIS will use the traps and lures that we deem to be most appropriate based on our review of international standards, scientific literature, and our own operational experience; the traps and lures to be used for a particular species will be set forth in the operational workplan. That being said, operational workplans most commonly specify the use of Jackson traps, multilure traps, and/or sticky spheres.

Several commenters stated that the trapping protocol needed to be set forth in the RMD or notice itself.

APHIS provides specific trapping protocols in operational workplans, rather than RMDs and *Federal Register* documents, for several reasons. This practice allows us to adjust the protocols in an expeditious manner in response to changes in pest distribution and/or population
density within a particular region of a foreign country. Similarly, it allows for regional variances in trapping protocols that may be necessary due to differing pest distribution or population density among regions of the country. Finally, it allows the protocols to keep pace with the development of more effective traps and species-specific lures.

We proposed that citrus fruit would have to be from approved PFPPs for *B. correcta*, *B. cucurbitae*, *B. dorsalis*, *B. occipitalis*, *B. pedestris*, and *B. tau*; or we would have to determine that places of production are located in ALPPs for these species of fruit fly based on trapping, and the citrus would have to receive in-transit cold treatment as an additional phytosanitary safeguard.

A commenter stated that PFPPs differ significantly from pest-free areas in terms of how they are delineated and how they must be maintained. The commenter suggested that APHIS amend 7 CFR 319.56-5, which sets forth our process for recognizing pest-free areas in foreign regions, in order to set forth conditions for the establishment of PFPPs.

Section 319.56-5 currently provides that APHIS’ determination of pest-free areas relies on the criteria set forth in ISPM No. 4, “Requirements for the establishment of pest-free areas,” as well as on our evaluation of the adequacy of the region’s survey protocol for delineating the pest-free area. If APHIS determines that the area is indeed pest-free, we publish a notice or rule in the *Federal Register* announcing that the area in question meets the above criteria; this notice requests public comment. Following the comment period, APHIS announces its final decision in a subsequent *Federal Register* notice.

As a procedural matter, we cannot amend § 319.56-5 in this notice; a notice may not be used to amend regulations. We are also uncertain how the commenter suggests that this section be amended. If the commenter is suggesting that we apply the notice-based process for
recognizing pest-free areas to PFPPs, we consider this to be impracticable. A pest-free area is usually a geopolitical entity or large geographical area within a country; no country currently has more than 50 such areas recognized by APHIS, and most have less than 20. In contrast, a single country may have hundreds of PFPPs. Using Federal Register notices to recognize or decertify each such place of production cannot feasibly be done. If the commenter is suggesting that we amend § 319.56-5 to specify the criteria that APHIS relies on to make a determination that an area is a PFPP, we will take this into consideration for future rulemaking.

The same commenter pointed out that two ISPMs exist which pertain to the establishment and maintenance of pest-free areas, Nos. 10 and 35. Since the RMD had made no reference to these ISPMs, the commenter inferred that APHIS would not follow these standards for purposes of the systems approach.

The United States has agreed to both of these ISPMs, and we will adhere to them within the context of the systems approach.

The same commenter pointed out that both of these ISPMs recommend the use of buffer areas around pest-free places of production, but saw no reference to such zones within the RMD.

Consistent with these ISPMs, we will require such zones be established in order to recognize a place of production as pest-free. The specific parameters for such zones will be set forth in the operational workplan.

One commenter stated that citrus fruit should only be allowed from pest-free areas, as outlined in § 319.56-6, as a risk management measure for Bactrocera spp. The commenter stated that PFPPs are not an appropriate risk mitigation measure for Bactrocera spp.

APHIS disagrees with the commenter that only pest-free areas provide an appropriate level of protection against Bactrocera spp. APHIS has used systems approaches with PFPPs for
a number of commodities with high risk pests. A systems approach can provide an alternative to single measures to meet the appropriate level of phytosanitary protection, or can be developed to provide phytosanitary protection in situations, in which no single measure is available (IPPC, 2002). As part of this systems approach, PFPPs satisfy requirements for the appropriate level of protection (IPPC, 1996, 1999; NAPPO, 2003).

The NPPO of Ghana stated that they are not aware that China has submitted information to the IPPC on ALPPs for fruit flies since 2009.

APHIS will work with China to develop an operational workplan which will include all of the requirements for development of PFPPs and ALPPs. APHIS will require appropriate trapping and survey data before allowing exports from pest-free places of production or before recognizing ALPPs in China.

Three commenters stated that ALPP thresholds are not indicated in the RMD.

Requirement 12 of the risk management document specifies that if more than 0.7 FTD (number of fruit flies captured per trap per day) of any species of fruit fly is trapped, APHIS-approved pesticide bait treatments must be applied in the affected place of production in order for the place of production to remain eligible to export fruit. Pesticide treatments must be applied weekly until fruit fly numbers drop below 0.7 FTD.

One commenter stated that the ALPP FTD thresholds are too high and that if a trap finds adult flies, the likelihood of finding immature flies inside the fruit is much higher.

If APHIS finds that this threshold is too high, we can lower the threshold in the operational workplan. This is a systems approach with additional measures for fruit flies including bagging and cold treatment. This threshold will not apply to the flies B. minax and B. tsuneonis, which will require pest-free places of production.
Four commenters stated that monitoring procedures that will be used to establish ALPP are not indicated in the RMD.

Requirements 12 through 14 in the RMD specify the monitoring procedures for fruit fly populations.

Requirement 14 in the RMD specified that citrus fruit to be imported into the United States would have to be treated with an APHIS-approved treatment. One commenter stated that requirement 9 in the RMD is inconsistent with requirement 14 as to when a treatment is required to export fruit from China.

APHIS recognizes that those two requirements may be confusing. As we explained in the notice, if the place of production is a PFPP for the species of fruit fly, then treatment for that species is not required. If the commodity is bagged pummelos, treatment is not required as long as the area is an ALPP for B. correcta, B. cucurbitae, B. dorsalis, B. occipitalis, B. pedestris, and B. tau and a PFA for B. minax and B. tsuneonis.

Two commenters expressed concern that cold treatment efficacy data is lacking. One of the commenters stated that research should be carried out to validate the efficacy of cold treatment on fruit flies found in Chinese production areas before any imports from China are approved. These commenters and several others stated that cold treatment is not effective for B. minax and B. tsuneonis.

APHIS agrees that cold is not effective for B. minax and B. tsuneonis, but we are not proposing stand-alone cold treatments for these two species. APHIS does expect, that while cold treatments are not 100 percent effective for B. minax and B. tsuneonis, there will be some mortality which will help the effectiveness of the systems approach.
APHIS notes that we are using a systems approach to mitigate risk from China citrus pests. APHIS has used systems approaches for a number of commodities with high risk pests. A systems approach can provide an alternative to single measures to meet the appropriate level of phytosanitary protection, or can be developed to provide phytosanitary protection in situations, in which no single measure is available.\(^9\) As part of this systems approach, pest-free places of production satisfy requirements for the appropriate level of protection (IPPC, 1996, 1999; NAPPO, 2003).\(^{10}\)

One commenter expressed concern that even if cold treatment schedules are approved, China may not apply them correctly.

China has more than 10 years’ experience in applying cold treatments in transit to various types of fruits. The operational workplan and APHIS treatment manuals will spell out the requirements to apply the treatment. APHIS gives other NPPOs including China training in applying cold treatments. Cold treatment temperatures are monitored at ports of entry so if they are improperly applied the shipments may be rejected. APHIS has never intercepted fruit flies in any cold treated commercial shipments of fruit from China.

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One commenter stated that China should be allowed to cold treat in China rather than in transit.

Under 7 CFR part 305, an approved cold treatment may be conducted for any imported regulated article prior to shipment to the United States if certified facilities are available. At this time there are no APHIS-certified cold treatment facilities in China.

One commenter stated that irradiation is the only phytosanitary treatment approved for all of the listed species. The commenter asked if that is what is meant by APHIS-approved treatment.

APHIS agrees that irradiation is an effective treatment against the listed species, but a phytosanitary treatment is not the only approach. As we explained above, APHIS is using a systems approach to mitigate risk from China citrus pests and the initial notice, the PRA and RMD that accompanied it, and this final notice provide evidence in support of the efficacy of the systems approach.

One commenter stated that APHIS should require irradiation for citrus from China.

APHIS is not requiring irradiation because a systems approach; including pest-free places of production, fruit bagging, and cold treatment in addition to other measures, will provide an appropriate level of phytosanitary protection.

The same commenter cited the example of fresh bananas from Ghana, which must be irradiated as a condition of entry into the United States to mitigate the risk of *Bactrocera dorsalis*. The commenters stated that to not require irradiation for citrus from China would be a violation of the SPS Agreement which requires members to ensure that sanitary and phytosanitary measures do not arbitrarily or unjustifiably discriminate between members where identical or similar conditions prevail. The commenter also stated that bananas are regarded as
unusual host for *Bactrocera* spp. as they do not infest when unripe, and cited an article in support of their position.\(^{11}\)

As we explained above, APHIS believes that a systems approach for citrus from China will provide an appropriate level of phytosanitary protection. We also disagree with the commenter that not requiring irradiation for citrus from China violates the SPS Agreement; the SPS Agreement also allows exporting countries to request equivalent mitigation strategies to that proposed by an importing country; thus a commodity from one country may have very different import requirements from those for a commodity from another country, even if the pest complexes for the commodities are identical or similar.

With regard to the article cited by the commenter, we note that at least one author has reported green bananas as a host of *B. dorsalis* (*invadens*) in Africa. *Rwomushana et al.* reported rearing *B. invadens* from banana (Musaceae), and stated that banana is known to be a major host of *Bactrocera* species. *Rwomushana et al.* also reported that *B. invadens* can infest green banana both in the laboratory and field.\(^\text{12}\)

Finally, while making changes to the requirements for the importation of bananas from Ghana is outside the scope of this action, the NPPO of Ghana may request such a revision pursuant to 7 CFR 319.5.

Requirement 15 in the RMD specified that fruit would have to be washed, brushed, surface disinfected in accordance with 7 CFR part 305 and according to treatment schedules listed in the PPQ Treatment Manual, and treated with fungicide at labeled rates. The RMD stated that these mitigations would minimize the likelihood of Lepidoptera, Acari, other Diptera, and other pests being present on the fruit. One commenter stated that Lepidoptera and Diptera are internal feeders and will not be mitigated by these measures. The commenter stated that *Bactrocera minax* and *B. tsuneonis* in particular will not be mitigated by these measures.

We agree that washing and brushing will remove some Lepidoptera, but may not remove Diptera. We have removed the references to Diptera from requirement 15; the revised RMD is available on the Regulations.gov website (see footnote 1 in this document for a link to Regulations.gov). We do note, however, that Lepidoptera and Diptera are mitigated by other

aspects of the systems approach, as well. These include PFPPs, ALPPs, and inspections of fruit, including fruit cutting to detect internally feeding fruit fly larvae.

Requirement 16 in the RMD specified that if pummelo fruit are bagged on trees with double-layered paper bags no more than 2 months prior to harvest, no further treatment would be required. One commenter stated that instead of “no more than 2 months prior to harvest,” the requirement should be “at least 2 months prior to harvest.”

We agree with the commenter and have made this change to the RMD.

One commenter stated that a requirement for a hypergeometric sample, similar to that which applies to the importation of Chinese and Japanese pears, should be included in the RMD.

The sampling plan for fruit in China will be spelled out in the operational workplan. APHIS often uses the hypergeometric distribution to develop sampling plans.

The RMD stated that Lepidoptera pests leave obvious feeding damage and are readily detected by inspection and standard industry packinghouse procedures including culling. One commenter asked if there is evidence Carposina spp. are easily inspected for and can be culled.

Lepidoptera pests leave obvious feeding damage. Inspection in the packing house, culling fruit, and inspection at port of entry are standard measures for Lepidoptera larvae in citrus. If pests are frequently intercepted other measures can be added. Citrus is not a primary host for Carposina spp. moths which mainly attack and infest stone fruit.

One commenter stated that Chinese citrus imports should be limited to cold weather climates and ports of entry for a minimum three-year trial period in which APHIS can monitor compliance with the fruit fly trapping protocol, evaluate pest-free areas, packinghouse disease mitigation compliance, cold treatment performance, and interceptions at points of entry.
This request is predicated on the assumption that the NPPO of China lacks the ability and intent to abide by systems approach requirements. For reasons discussed above, we disagree with those assumptions. We have determined, for the reasons described in the RMD that accompanied the notice, that the measures specified in the RMD will effectively mitigate the risk associated with the importation of citrus from China. The commenter did not provide any evidence suggesting that the mitigations are not effective. Therefore, we are not taking the action requested by the commenter.

For the reasons specified in the initial notice, the PRA and RMD that accompanied it, and this final notice, we do not consider such restrictions to be necessary.

Economic Effects

One commenter stated that Chinese production figures are low because of recent citrus greening outbreaks but are likely to swell following identification of citrus greening management tools.

Citrus greening management tools of that magnitude are still very much in the methods development stage, or we would be using them domestically.

One commenter expressed concern that imports will adversely impact the domestic pummelo industry.

China produced 4.9 million metric tons of pummelos and exported 200,000 during the 2018/19 season. Major export destinations for Chinese pummelos include Netherlands, Russia, Hong Kong, and other European countries.\(^\text{13}\) It is unlikely that China would divert a significant portion of the pummelo exports to the U.S. markets.

Two commenters stated that China cannot be trusted to engage in fair trade.

China is a signatory to the IPPC and, as such, has pledged to abide by the import requirements of other member countries.

Two commenters expressed concern that China will manipulate prices.

We acknowledge that China is a Northern-Hemisphere producer and there is some overlap with China’s shipping season with the marketing season in the United States. However, the citrus imports from China are likely to be small. Overall, Southeast Asia, Europe, and Russia remain the largest export markets for citrus from China.

Miscellaneous

In the initial RMD, we specified that in those areas with low prevalence for Bactrocera species that are not cold-tolerant, cold treatment according to treatment schedule T107-b would be required. That treatment schedule is designed as a stand-alone treatment, not as part of a systems approach. We have therefore approved a new cold treatment schedule, T107-o, to be used as part of a systems approach for Nanfeng honey mandarin, ponkan, sweet orange, and Satsuma mandarin from China and have updated the RMD accordingly. This new schedule has the same time and temperature requirements as T107-b, but specifies that it must be administered as part of a systems approach.

Some citrus classification systems differ in how certain commodities are recognized.APHIS has consulted with USDA taxonomists and have clarified the classifications of the commodities. The results of the consultation is as follows:

- *Citrus grandis* = *C. maxima* cv. guanximiyou (pomelo) is recognized and accepted by USDA as the pummelo under the name *C. maxima* cv. ‘Guanxi Miyou,’ also named *Citrus* cv. ‘Guanxi Miyou.’
- *Citrus poonensis* (ponkan) is recognized and accepted by USDA as the mandarin Ponkan
  
  *Citrus x poonensis* hort. ex Tanaka, also named *Citrus* cv. ‘Poonensis.’
- *Citrus kinokuni* (Nanfeng honey mandarin) is recognized and accepted by USDA as the
  mandarin Nanfeng honey mandarin *Citrus x aurantium* cv. ‘Kinokuni’, also named *Citrus*
  cv. ‘Kinokuni.’
- *Citrus sinensis* is recognized and accepted by USDA as the sweet orange *Citrus x
  aurantium* var. *sinensis*, also named *Citrus x aurantium* var. *sinensis*.
- *Citrus unshiu* is recognized and accepted by USDA as the Satsuma *Citrus x aurantium*
  cv. ‘Unshiu,’ also named *Citrus* cv. ‘Unshiu.’

Therefore, in accordance with § 319.56-4(c)(3)(iii), we are announcing our decision to
authorize the importation of fresh pummelo, Nanfeng honey mandarin, ponkan, sweet orange,
and Satsuma mandarin fruit from China into the continental United States subject to the
following phytosanitary measures:

- Importation in commercial consignments only.
- Registration of places of production and packinghouses with the NPPO of China.
- Certification by the NPPO of propagative material used at places of production as
  being free of quarantine pests.
- Periodic inspections of places of production throughout the shipping season.
- Grove sanitation.
- PFPPs for *Bactrocera minax* and *B. tsuneonis*.
- PFPPs for *B. correcta*, *B. cucurbitae*, *B. dorsalis*, *B. occipitalis*, *B. pedestris*, and *B.
  tau*; or determination that places of production are located in areas of low pest
  prevalence for these species of fruit fly based on trapping, and in-transit cold
treatment as an additional phytosanitary safeguard, except for pummelo which requires bagging.

- Maintaining the identity and origin of the lot of fruit throughout the export process to the United States.
- Safeguarding of harvested fruit.
- Post-harvest visual inspection of fruit by the NPPO or officials authorized by the NPPO according to a biometric sample.
- Cutting a portion of the fruit in the sample to inspect for quarantine pests.
- Washing, brushing, and treatment with surface disinfectant and fungicide.
- Issuance of a phytosanitary certificate with an additional declaration.
- Port of entry inspections.
- Importation under a permit issued by APHIS.
- Possible remedial measures in the event of detection of quarantine pests at registered places of production or packinghouses, or in/on consignments of citrus fruit from China at ports of entry into the United States.

Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.), the reporting and recordkeeping requirements included in this notice are covered under the Office of Management and Budget (OMB) control number 0579-0049. The estimated annual burden on respondents is 5,420 hours, which will be added to OMB control number 0579-0049 in the next quarterly update.
E-Government Act Compliance

The Animal and Plant Health Inspection Service is committed to compliance with the E-Government Act to promote the use of the internet and other information technologies, to provide increased opportunities for citizen access to Government information and services, and for other purposes. For information pertinent to E-Government Act compliance related to this notice, please contact Mr. Joseph Moxey, APHIS’ Information Collection Coordinator, at (301) 851-2483.

Congressional Review Act

Pursuant to the Congressional Review Act (5 U.S.C. 801 et seq.), the Office of Information and Regulatory Affairs designated this action as not a major rule, as defined by 5 U.S.C. 804(2).


Done in Washington, DC, this 13th day of April 2020.

Michael Watson,
Acting Administrator, Animal and Plant Health Inspection Service.

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