



June 24, 2019

Submitted via Federal eRulemaking Portal

U.S. Department of Agriculture
Animal & Plant Health Inspection Service
Plant Protection and Quarantine
4700 River Road
Riverdale, MD 20737-1236

Re: Docket No. APHIS–2014–0005; Comments on Pest Risk Assessment and Risk Mitigation Document for the Importation of Fresh Citrus from China into the Continental United States

To whom it may concern:

California Citrus Mutual (“CCM”), a trade association of citrus producers, submits these comments on the referenced Pest Risk Assessment (“PRA”) and Risk Mitigation Document (“RMD”) that assess and propose a Systems Approach to allow citrus producers in China to send certain citrus fruits to the United States market. Our comments are organized in two sections: first, general comments on the approach; and second, more specific concerns on items contained in the PRA and RMD documents.

As an overarching comment, we are confused by the events that have taken place with respect to the request from China. In 2014, the Animal and Plant Health Inspection Service (“APHIS”) proposed to allow China to export several citrus fruits to the U.S. if all fruit was placed in paper bags on the trees before harvest. China objected to this protocol and as a result the 2014 proposal was not finalized.

In 2017, China again requested access to the U.S. market, so APHIS determined a review of the earlier PRA was required. In carrying out this review, APHIS identified a “significantly longer pest list than the 2014 PRA, and identified two additional quarantine pests . . . that could follow the pathway on” citrus fruits. However, despite the significantly longer and more serious list of pests, APHIS is now proposing a Systems Approach that is LESS stringent than the Systems Approach proposed in 2014. The logic being applied is both puzzling and concerning and for these reasons raises many questions; these are detailed below.

In General

1. Overall Approach is Questionable

One of our main questions and concerns is why APHIS is choosing in this proposal not to require *pest free areas* of production for citrus fruit destined for the U.S. market. Instead, APHIS is proposing to substitute a protocol of (A) pest free *places* of production (PFPP) (see comment below for PFPP) or areas of *low* pest prevalence (ALPP) coupled with essentially “self-inspection” and a largely unvalidated in-transit cold treatment for (B) the protocol to bag all individual fruit coupled with the requirement of proven and validated, time-tested in-transit cold treatment for fruit from places of production located in areas of China south of the 33rd parallel.

We recognize individual bagging was the initial proposal in 2014 and that the Chinese stated this was not operationally feasible. However, it is our understanding that the protocols for both fresh apples and sand pears grown in China for export to the U.S. require double-layered bagging once the fruit is of a certain size on the tree, and that bagging must stay in place into the packinghouse. In addition, the pest situation for apples and sand pears is *far* less complicated than it is for citrus, since we believe only one (1) species of fruit fly, the Oriental Fruit Fly, must be managed for apples and sand pears. We do understand the bagging practice (and cold treatment if the fruit is grown south of the 33rd parallel) has been effective with respect to the Oriental Fruit Fly for apples and sand pears.

In this new proposal for citrus fruits, bagging is envisioned only for pomelos – and if bagging is done for pomelos, cold treatment would not be required. This is contrary to what is required for apples and pears that are grown in areas of China south of the 33rd parallel. For the other fruits, the protocol being proposed would rely on PFPP's without any treatment requirement or ALPPs and then inspections followed by cold treatment (see below for more discussion on this point). We believe the less stringent approach of *pest free places of production or low-pest areas and inspections* is far less than ideal, and we would prefer that APHIS continue to require the bagging protocol for all citrus fruits. If, however, APHIS determines to go forward with the PFPP or ALPP and inspection protocol, we believe this less stringent approach must be extremely carefully monitored, especially for the initial years of the program – see discussion immediately below on this point.

2. APHIS Should Conduct Oversight for a Period of at Least Two Years

The Systems Approach that is outlined in the RMD is complex and multi-faceted; the key, foundational step of the Systems Approach is trapping for *eight* different species of fruit flies; for some of these species the effectiveness of the lures is, or may be, questionable (Xia et al (2018)). This trapping will determine whether the fruit must be cold treated -- or not -- for most of the fruit fly species. Different traps and different lures will likely be required, depending on the species of fly, and preferred hosts must be identified. This protocol leads to a very complex trapping program; the trapping will have to be carried out with the utmost attention to detail.

As a result, we **strongly** believe that direct oversight by APHIS personnel is needed, at least for the first two years of the program. Instead of direct oversight, APHIS seems to be “handing off” all aspects of the implementation of the Systems Approach to Chinese officials, or persons authorized by Chinese officials. This “hand off” does not give the U.S. industry any confidence that the numerous steps that must be followed will *in fact* be followed day after day, week after week, month after month by all personnel involved in the cultivation, harvesting and packing of the Chinese products.

We question whether the Chinese citrus growers and packers have experience in adhering to the type of protocols being proposed. Were these protocols developed by the Chinese based on experience and then offered to APHIS? Or, in contrast, did APHIS design these protocols and suggest them to China? Either way, there needs to be evidence that the growers and packers in China can successfully adhere to these types of practices. The RMD does not indicate that a “track record” has been established with exports to other countries. If there is not an established record of pest-free exports of citrus fruits from pest free places of production or low-pest areas to other countries, there is a compelling reason to require APHIS in-person oversight of this Systems Approach for at least the first two years of its existence.

In short, we believe a pre-clearance component should be adopted within the protocol – at least for the first two years of any program that is ultimately agreed to. Furthermore, it may be necessary for APHIS personnel to train Chinese personnel to develop skills on enforcement and oversight.

3. More Research Needed on Efficacy of Cold Treatment for Certain Pests

APHIS is proposing to rely upon cold treatment practices to mitigate risk, which in general can work but there are exceptions. *Bactrocera minax* is a major pest of citrus in China and cold treatment is not effective to mitigate the risk of this major pest (see APHIS-sponsored research Xia et al (2018)) (a copy of this study is attached). We do not believe research, with accompanying documentation, as to the effectiveness of cold treatment, and at what temperatures, for pests specific to China that are identified in the pest risk assessment has been developed. A reliance on assumption is simply not acceptable. (This topic is also addressed below in comments on the RMD, items 7 and 8.)

4. Buffer Zones Needed Around Places of Production

There appears to be relaxation in protocols proposed for China regarding risk. For years finding a Probit 9 level of certainty, or protection, has been the stated goal. At least initially, this created a need for a buffer zone around production areas eligible for export. The use of buffer zones is described in International Standard for Phytosanitary Measures 10 (ISPM 10) and ISPM 35 Systems approach for pest risk management of fruit flies (Tephritidae). That is not being considered in this proposal and CCM finds this to be a **major omission** for our defense against pest and disease invasion.

5. Production South of 33rd Parallel

In other rules for imports from China, such as those for apples and sand pears (discussed above), APHIS requires that production areas south of the 33rd parallel follow more stringent practices, as these areas are more prone to pest populations and/or spread of disease because of the climatic conditions. That requirement does not appear in this document; we believe this omission needs to be corrected as we understand the majority of citrus in China is indeed grown south of the 33rd parallel.

6. PFPP is Not Appropriate for Risk Management of *Bactrocera* spp. Pests

The biology of *Bactrocera* spp. does not afford critical characteristics suitable to assure the attainment of pest free places of production as outlined in ISPM 10.

- *Bactrocera* spp. naturally spread easily over moderate distances.
- The possibilities of artificial spread of *Bactrocera* spp. are not limited since one piece of infested fruit can act as the genesis of a new pest population.
- *Bactrocera* spp. have a wide host range including species *Bactrocera minax* and *B. tsuneonis* who although are oligophagous to citrus have a wide host range, as indigenous species of *Citrus* and *Citrus* relatives in the family Rutaceae are in abundance in the country of China.
- *Bactrocera* spp. can readily survive from previous seasons in citrus producing areas of China.
- *Bactrocera* spp. has a high rate of reproduction.
- Some of the named quarantine pest species of *Bactrocera* spp. do not have a sensitive method of detection available. This has been identified as especially true for *Bactrocera minax* which is

a major pest of citrus in China (again, see APHIS sponsored research Xia et al (2018), which is attached).

Therefore, *pest-free areas*, as outlined in 7 CFR 319.56-6, should be substituted for PFPP in all cases in the risk management document as a risk management measure for *Bactrocera* spp. It cannot be stated strongly enough that PFPP is not an appropriate risk management measure to mitigate the risk of *Bactrocera* spp.

Specific Comments on PRA and RMD Provisions

A review of specific provisions and statements in the PRA and RMD brought to our attention the following questions and/or deficiencies.

Pest Risk Assessment

1. Pathogen Related to Citrus Black Spot

On page 93 of the 9/29/2017 version 4 of the PRA, there is a discussion about *Phyllosticta citrichinaensis*. We understand this pathogen to be related to citrus black spot, one of the most destructive diseases of citrus, and one which is not currently known to be present in the U.S. Two citations are set forth, from Wang and Stammler. In reviewing the Wang document and supporting material, we note specific scientific evidence regarding the conclusion that this pathogen could/would infect citrus. Stammler on the other hand does not cite studies or any other scientific foundation that we could identify discounting this fact.

On page 11, the Stammler article states: “According to current knowledge...” This is not reassuring to U.S. citrus growers; this approach moves APHIS several steps away from the axiom “When in doubt keep it out.” An adherence to caution is also removed from consideration, as the APHIS document goes on to state: “While these species were molecularly separated from *P. citricarpa*, there is a high degree of uncertainty if they are pathogens. Due to this uncertainty, further analysis cannot be conducted at this time.” That statement is totally opposite of the conclusion cited in the Wang report.

In summary, even though there is uncertainty, APHIS is asking the U.S. industry to assume the risk. That is unacceptable. If APHIS wishes to diminish the value of the Wang evaluation then APHIS must conduct its own study, not simply make an assumption or dismiss a concern. When information is lacking, it is not acceptable to simply discount the threat. We believe strongly that the threat must be thoroughly and carefully assessed.

- **Review of 2018 Thesis is Needed**

We would also like to bring to the attention of APHIS a 2018 PhD thesis entitled “The population structure of *Phyllosticta Citrichinaensis* and season dynamics *Phyllosticta* spp.” This study was conducted by Ke Zhang in Florida citrus groves. On page 29 Mr. Zhang states that “*Phyllosticta citricarpa* can cause protuberant freckles on mandarin and orange leaves, sunken spots on pomelo leaves and brown to black spots on mandarins (sic) and orange fruit.” Was this document reviewed in conjunction with this proposal? We are attaching this thesis for review by APHIS.

2. Risk Ratings Should be Changed

The risk rating for Lepidoptera: Carposina should be changed to HIGH (p. ii) and on p. 2 of the RMD.

In the discussion of risk elements on p. 118, we disagree with the rating for risk elements A2, A3 and the overall risk. APHIS has selected *medium* as the appropriate rating. Nowhere is there any discussion or information that post-harvest processing has any positive impact on risk mitigation. There was no information or indication that transport or storage has any impact on the pest(s) in question. Because there is a dearth of data in these two categories CCM believes the risk must be HIGH.

This rating of *medium* is also applied on page 119 to the *Overall likelihood of entry and introduction*. Yet risk elements A1 and B2 are both HIGH. Stated simply – a *high* risk combined with a medium risk should be a *high* risk if one is interested in protection. This is also true of Risk Element B on p. 122 – i.e., a *medium* and HIGH rating should lead to an Overall HIGH rating. APHIS is giving the benefit of the doubt to the Chinese production area and their officials; this elevates the risk factor for U.S. growers of citrus. We should not be taking *more* risk; in contrast, we should be demanding more of a safety factor unless and until there is a clearer answer as to whether the Chinese industry has a track record of adherence to the protocols required and zero detection upon arrival in the U.S.

Risk Mitigation Document

1. Clarity Needed on When a Treatment is Required

To our reading, Measures 9 and 14 are inconsistent as to when a treatment is required to export fruit from China. The list of measures set forth in the *Federal Register* notice of May 1, 2019 (84 *Fed.Reg.* 18475) adds to this confusion. This aspect of the RMD needs to be clarified – i.e., other than for pomelos, under exactly which situation is cold treatment required before the fruit can be exported?

2. Measure 14 – Irradiation Required?

Measure 14 states that all citrus fruit destined for the U.S. “must be treated with an APHIS approved treatment” . . . except for bagged pomelos. It is our understanding that the only approved method for fruit flies in the APHIS treatment manual is irradiation. Is this what is intended by Measure 14?

3. Requirement for Bagging

In the RMD, in Measure 16 (third sentence) there is a discussion about the requirement for paper bags to be put in place to wrap the fruit. A statement reads “*paper bags no more than two months prior to harvest*” is used. We believe this should read “*paper bags at least two months prior to harvest.*” A lesser time period than two months would not be acceptable.

4. Surface Disinfecting Not Effective

This comment pertains to Measure 15 of the RMD. Washing, brushing and surface disinfectant will not be effective against internal feeders such as Lepidoptera or Diptera. As such, we believe additional measures should be included in the Systems Approach to address Lepidoptera and Diptera.

5. Requirements for Samples Should be Stated

In Measure 23, a requirement for a hypergeometric sample should be included, similar to that which applies to the importation of Chinese and Japanese pears.

6. Definitions Needed of *Pest Free Places* and *Low Pest Prevalence Terms*

The RMD speaks to *pest free areas of production; areas of low pest prevalence* and *pest free places of production*. In reviewing the standards issued by the International Plant Protection Commission (“IPPC”), it is obvious there is a significant difference between these terms which can impact risk to the receiving country. The IPPC standards for *pest free places of production* and *areas of low pest prevalence* should be added to 7 CFR 319.56-5.

We also request APHIS to examine this dynamic specific to the discussion on importation of pomelos and whether the areas are free of *B.minax* and *B. tsuneonis*. Is this fruit being grown in pest-free *areas* or pest-free *places* of production (PFPP)?

7. Data on Appropriate Cold Treatment Protocols Needed

As discussed above, cold treatment if not carried out appropriately does not guard against fruit fly introduction. The lack of validation on the fruit flies found in Chinese production areas is unacceptable. We see no evidence that sufficient data on this subject has been developed let alone analyzed. We strongly believe this research needs to be carried out before any imports from China should be approved.

8. More Data Needed on Two Species of Carposina

To what extent has there been an evaluation as to whether inspection and culling are appropriate protection measures for all species of Lepidoptera? The 2017 version of the PRA adds two species of Carposina to the list of pests/pathogens. However, little data exists as to how these two species infest citrus. Since these species are of quarantine concern, research on the effectiveness of inspection and culling or cold treatment to address these species is needed before any exports to the U.S. are permitted.

9. Trapping Efficacy

CCM believes there is a disconnect in regards to trapping for Bactrocera and the efficacy of same. In fact it is synonymous, in our opinion, with trapping for the Asian Citrus Psyllid. One can trap for the psyllid but no trap has been devised that is deemed effective for an accurate assessment of population. Another example is the olive fruit fly that quickly became established in California in 1998 that eventually led to the developing of a specific lure to enhance effectiveness of a trapping program. It is our understanding that ***no single trap/lure*** works well for all species of Bactrocera. APHIS is obligated to be more specific in what they believe works, or whether multiple traps with differences are required. Why does APHIS believe a single trap/lure will suffice in this program?

Assuming our information is correct then another layer of training, observations and, perhaps, research is necessary to ascertain the efficacy of trapping as prescribed. This uncertainty leads us back to the

future in that pest free areas, bagged fruit or irradiation treatment appear to be the best options to manage risk and protect the domestic citrus industry.

Summary

Product from China arrives at Western ports. California ports have moderate climates which allow invasive pests to multiply over winter months and/or spread into host areas. For this reason, a reliance upon assumptions to protect the California citrus industry is not acceptable. Are the protocols being proposed for citrus grown in China effective *based on scientific evidence* to mitigate the risks associated with the pathogens and pests? Can the Chinese industry adhere to protocols? Can and will that government enforce protocols? We are not convinced at this time that the answer to these questions is yes.

APHIS apparently is prepared to accept that ALPP followed by inspections and inadequately tested cold treatment regimens will serve to protect the U.S. citrus industry against the numerous pests or diseases that are present in China. We continue to believe a physical barrier (fruit bagging) and a validated cold treatment should be required. APHIS also apparently is ready to accept that PFPPs can substitute for pest-free *areas* to mitigate the risk of *Bactrocera* spp fruit flies. We do not believe these “leaps of faith” have been justified by evidence. Instead, this relaxed approach needs to be strengthened by substituting pest-free areas for PFPP and confirming adherence to protocols by a stringent “in person” oversight conducted by APHIS personnel at least for the first two years of any program.

For all of the above reasons we must oppose the PRA and RMD as presented and request that additional research as discussed above be conducted before the request of China is given further consideration.

Cordially,

A handwritten signature in black ink that reads "Joel Nelsen". The signature is written in a cursive, flowing style.

Joel Nelsen, Past President
Strategic Advisor