

Japan – Measures Affecting the Importation of Apples (WT/DS245)
Recourse by the United States to Article 21.5 of the DSU

**Answers of the United States of America
to Questions from the Panel**

November 11, 2004

A. To both parties:

Q1. *Can Japan and the United States comment on the views expressed by the European Communities in paras. 41-43 and 58 of its third party submission? Can Japan and the United States comment on the EC statement in para. 82 of its third party submission: “This Panel must make an objective assessment of that matter, if necessary of its own motion, (emphasis added) also in the light of Article 21.5 and past Appellate Body and Panel reports”?*

1. The EC’s comments should not affect the Panel’s analysis, for several reasons. First, whether a measure is a “measure taken to comply” ultimately depends on the facts of the matter. In this case, there is no disagreement between the parties that the June 30 Detailed Rules are measures taken to comply, and there is no evidence or other factual basis for the Panel to conclude otherwise. In this regard, the EC is incorrect that the Appellate Body in *EC - Bed Linens* stated that a panel may disregard uncontested facts on the record. The quote in footnote 66 of the EC’s third party submission merely indicates that it falls to panels to make factual findings, and that it need not accept the factual assertions of one side or the other – in other words, when there is disagreement over the facts. Here, there is no factual disagreement, and no basis for concluding that the June 30 Detailed Rules are not a measure taken to comply. It should not be surprising that a panel is to conduct an objective assessment of this matter as well as other matters presented in a dispute, but in this case an objective assessment would confirm that the Detailed Rules are a measure taken to comply, based on the evidence and arguments presented by the parties.

2. In addition, the original panel found that Japan’s import regime for U.S. apple fruit, *as a whole*, was inconsistent with Japan’s obligations under the SPS Agreement.¹ The specific elements cited by the original panel in its report were examples of how the measure was inconsistent with Japan’s obligations, but the entire measure was found inconsistent. Japan accordingly replaced its WTO-inconsistent import regime with a new import regime for U.S. apples, all the elements of which are subject to challenge in Article 21.5 proceedings. For this reason as well, there can be no question that the June 30 Detailed Rules are a measure taken to comply.

3. Further, the EC is incorrect in suggesting that the question of whether a measure has been

¹See Panel Report, paras. 8.199, 8.224, 9.1(a).

taken to comply is “jurisdictional,” justifying a preliminary ruling by a panel “if necessary of its own motion.” As already noted, the question of whether a measure is one taken to comply ultimately depends on the facts of the matter. It is comparable to the question of whether the measure in question is an SPS measure, and thus subject to the SPS Agreement. It is not accurate to describe such questions as jurisdictional. Moreover, while it might be efficient to consider such questions as a preliminary matter, panels are not compelled to do so; indeed, this Panel has deferred consideration of the U.S. request for a preliminary ruling on the Operational Criteria. In addition, there is no basis for the panel to make, “of its own motion,” a preliminary ruling on the question of whether the June 30 Detailed Rules are a measure taken to comply. Again, there is no factual dispute on this issue, and neither party has requested such a preliminary ruling. Parties to a dispute are responsible for meeting the burden of proof for the claims and facts they are asserting; that burden cannot be met by a third party, nor may a panel make a party’s case on its behalf.

4. In short, there is no dispute that the June 30 Detailed Rules are a measure taken to comply, and there is no legal or factual basis for the EC’s assertion that the Panel needs to consider this question further.

Q2. *Are the Operational Criteria currently applied? If so, when did they come into effect? What instrument was in existence on 30 June 2004? What instrument was in existence on 30 July 2004? Please document the legal status of the Operational Criteria.*

5. The Operational Criteria were not presented to the United States as part of Japan’s measure taken to comply when Japan explained its measure in June 2004. Similarly, Japan made no reference to the Operational Criteria in its notification to the WTO of its measures taken to comply, in its July 29 request for arbitration under Article 22.6 of the DSU, or in its July 30, 2004 DSB statement. Rather, the only instrument referenced by Japan as its measure taken to comply, prior to its first submission in this proceeding, are the June 30, 2004 Detailed Rules.

6. Japan appears to recognize that the Operational Criteria were not in effect on June 30 (or even now), describing them as an “irrevocable offer”, a “draft”, a set of guidelines that “were to be discussed”² with the United States and which Japan “intended to adopt.”³ As these descriptions indicate, the Operational Criteria would be nothing more than what the United States has consistently described them to be. The Criteria were not in effect upon expiration of the reasonable period of time, are not currently in effect, are not a measure, and are not a measure taken to comply with the DSB’s recommendations and rulings.

7. Accordingly, the Operational Criteria should not be considered a measure for the purposes of this proceeding. At best, they are a proposed measure. The requirements for

²Japan Second Submission, para. 3; Japan First Submission, para. 1.

³Certification of Toyoharu Fukuda, dated September 13, 2004. Exhibit JPN-2.

compliance are not, and should not be, met with mere aspiration. A promise to implement at some later date does not transform a draft instrument into a measure. The *Understanding on Rules and Procedures Governing the Settlement of Disputes* (“DSU”) provides no basis for reliance on a promise to implement.

8. Moreover, the Operational Criteria are not a measure within this Panel’s terms of reference. The Criteria were not in effect at the time of the panel request or the Panel’s establishment. A panel’s terms of reference include only measures in existence at the time of the panel’s establishment. A panel proceeding would be nothing more than an exercise in speculation if it were otherwise. As the Appellate Body noted in this dispute, “[a] panel’s terms of reference perform a fundamental function as they ‘establish the jurisdiction of the panel’ and ‘define the scope of the dispute.’”⁴ In *Brazil – Coconut*, the Appellate Body also said that “. . . a panel’s terms of reference fulfil an important due process objective – they give the parties and third parties sufficient information concerning the claims at issue in the dispute in order to allow them an opportunity to respond to the complainant’s case.”⁵ Departing from the terms of reference would lead to never-ending disputes, would place an undue burden on parties and panels alike, and would defy the aim of securing a positive solution to this dispute as provided for in DSU Article 3.7.

Q3. *In order to have a better understanding of the measure(s) taken by Japan to comply with the recommendations and rulings of the DSB, the Panel has taken a list of elements composing the measure reviewed by the original Panel (see Panel Report, para. 8.25) and modified it to take into account the modifications introduced by Japan. The Panel would appreciate the views of the parties as to whether the list below summarizes accurately the measure(s) taken by Japan:*

- (a) *Fruit must be produced in designated fire blight-free orchards. Designation of a fire blight-free area as an export orchard is made by the United States Department of Agriculture (USDA) upon application by the orchard owner. For the time being, the designation is accepted only for orchards in the states of Washington and Oregon;*
- (b) *the export orchard must be free of plants infected with fire blight;*
- (c) *the fire blight-free orchard must be surrounded by a ten-meter buffer zone (or border zone) free of fire blight;*

⁴Appellate Body Report, *Japan – Measures Affecting the Importation of Apple Fruit*, AB-2003-4, adopted on 10 December 2003, para. 133 (quoting the Appellate Body Report, *Brazil – Measures Affecting Dessicated Coconut and Coconut Milk Powder* (“*Brazil – Coconut*”), p. 22, and the Appellate Body Report, *U.S. Carbon Steel*, para. 126).

⁵Appellate Body Report, *Brazil – Coconut*, p. 22.

- (d) *the orchard and surrounding buffer zone must be inspected once per year at early fruitlet stage. Any detection of a blighted tree in this area by inspection will disqualify the orchard;*
- (e) *harvested apples must be surface disinfested by soaking in sodium hypochlorite solution;*
- (f) *the interior of the packing facility must be disinfested by a chlorine treatment;*
- (g) *fruit destined for Japan must be kept separate post-harvest from other fruit;*
- (h) *US plant protection officials must certify that fruits are free from fire blight and have been treated post-harvest with chlorine; and*
- (i) *Japanese officials must confirm the US officials' certifications and inspect packaging facilities.*

In answering this question, please clarify whether the modification of the regime regarding the crates where apples are placed relates to the fumigation of harvesting crates or to the disinfestation of shipping crates.

9. The United States believes that the Panel's summary of Japan's revised measures accurately captures the substance of the revised measures. As noted by the United States in its first submission, the substantive amendments to Japan's import regime for U.S. apple fruit were limited to: (1) a reduction of inspections from three to one inspection; (2) a reduction of the buffer zone from 500 to 10 meters; and (3) the elimination of the requirement that apple crates be disinfested. Regarding the elimination of this last element, disinfection of harvesting crates or bins, the United States interprets Japan's revised measure as having eliminated this step as it is unable to identify crate disinfection in Japan's June 30, 2004 Detailed Rules. The United States would welcome clarification of this point, however.⁶

Q4. *What is the legal status of the Detailed Rules? With respect to prohibition of apple fruit from US States other than Washington and Oregon, the first submission of Japan (para. 55) makes reference to some "paperwork" that would need to be completed. How does this paperwork differ from what is required under the Detailed Rules dated June 30, 2004? The Detailed Rules, para. 2,*

⁶Harvesting crate disinfection consists of immersion of crates in a solution of 100 ppm sodium hypochlorite for at least one minute. This process does not involve fumigation of the harvesting crates. Harvesting crate disinfection/disinfestation was element (f) of the measure as originally defined by the Panel in paragraph 8.25 of the Panel Report.

requires that the cold and fumigation treatment facilities and the tentative storage facilities “shall be located in Washington and/or Oregon States”. What is required (procedurally) to modify the Detailed Rules? Has the United States made a specific request to export apples from States other than Washington and Oregon?

10. The U.S. concern is that the restriction of eligible export orchards to orchards in Washington and Oregon is specifically linked to Japan’s apple fruit/fire blight measures. The scientific evidence does not establish that mature, symptomless apple fruit are capable of transmitting *E. amylovora* and subsequently initiating fire blight disease in Japan or elsewhere. Therefore, a fire blight measure restricting exportable fruit to Washington or Oregon apple fruit is maintained without sufficient scientific evidence within the meaning of Article 2.2 of the SPS Agreement. Mature, symptomless apple fruit should be exportable from every U.S. apple producing state, providing that the apples meet other U.S. export criteria. However, Japan maintains a fire blight-specific measure that clearly delimits eligible exporting states to Washington and Oregon.

11. The issue of other “paperwork” appears to have arisen at the original panel proceeding. Specifically, in response to the U.S. claim that Japan’s restriction of apple fruit to Washington and Oregon was maintained in breach of Article 2.2 of the SPS Agreement, Japan argued that its state-specific restriction was justified because “(1) the United States’ initial request was only for these States and (2) the United States submitted to Japan a proposal of phytosanitary measures that will prevent the introduction of *Erwinia amylovora* into Japan only for apple fruit produced in Washington and Oregon.” Further, Japan noted that “[i]f the United States can certify the absence of other pests [in U.S. states other than Washington and Oregon], or it proposes a measure that is objectively suitable for preventing the introduction of those pests, Japan will accept shipments from other States under the same conditions.” In this Article 21.5 proceeding, Japan reiterated that the restriction on exports from Washington and Oregon hinged on the submission of paperwork regarding other pests from prospective exporting states.⁷

12. Put simply, as noted in the U.S. second submission, there is no scientific evidence to support or justify a measure in any way restricting the eligibility of growers or packers to those in Washington and Oregon based on concerns regarding the hypothetical spread of fire blight. Japan can continue to demand and await paperwork on other plant diseases and quarantine pests that may be of concern in other U.S. states, and awaiting that paperwork could, in certain scenarios, be a legitimate reason to forestall exports from those states. The United States simply suggests that Japan cannot forestall those exports under the auspices of a fire blight-specific measure. However, this is exactly what Japan’s current fire blight measures do.⁸ Instead, insofar

⁷See Japan First Submission, para. 64.

⁸See MAFF Notification No. 354, para. 1 (“fresh apple fruits . . . must be produced in the areas designated by the U.S. plant protection authority as the areas . . . where the U.S. plant protection authority inspect for fire blight at proper times in the States of Washington and Oregon, U.S.A.”; see also Detailed Rules, para. 2 (June 30, 2004)

as Japan’s measures purport to mitigate hypothetical fire blight concerns, they must, in light of the scientific evidence, permit apple growers and packers from every apple-producing state to export mature, symptomless apple fruit to Japan. Further, this compliance proceeding’s focus is on the WTO-consistency of Japan’s measures as they currently exist, not as they might exist in the event that Japan chooses to amend them. The simple fact is that Japan’s measures currently restrict export eligibility of orchards, growers and packers to the states of Washington and Oregon, and they do so in the absence of sufficient scientific evidence within the meaning of Article 2.2 of the SPS Agreement.

Q5. *In para. 51 of its second submission, Japan makes reference to what qualifies as a border zone but also refers to an exception for varieties of apple trees “determined by the United States to be the most susceptible varieties in its literature”. Does Japan accept determinations by the United States?*

13. The United States notes that the reference in question is not grounded in the provisions of the Detailed Rules dealing with buffer/border zones,⁹ but only on the terms of the Operational Criteria. As discussed previously, the Operational Criteria are neither a measure nor a measure taken to comply. The Detailed Rules define the zone as being of 10 meters width and possessing “[n]o tree with fire blight symptoms.”¹⁰ Further, all buffer/border zones must be inspected.¹¹ Japan’s first submission describes border zones in greater detail, but does so only through the vehicle of Japan’s Operational Criteria.¹² The Operational Criteria alone would set forth the distinction between buffer zones for least-resistant and more-resistant varieties of apple fruit.

14. The Operational Criteria, as described in Japan’s first submission, would appear to require that least-resistant varieties not only be surrounded by a 10 meter zone free of fire blight, but further that the zone may contain *no potential host materials whatsoever*. In other words, least-resistant varieties must be surrounded by “a passageway, a waterway, a cliff or other natural barriers” of at least 10 meters width.¹³ According to this interpretation of the Operational Criteria, least-resistant varieties would not be eligible for an *exception* from the border zone requirement, but rather are subject to a tightening of the fire blight-free requirement. Under the

(requiring that the cold and fumigation treatment facilities and the tentative storage facilities “shall be located in Washington and/or Oregon States.”)

⁹Japan has renamed its buffer zone a “border zone,” but Japan’s “border zone” is no less restrictive to trade or any more supported by the scientific evidence than a “buffer zone.” As demonstrated by the United States in each of its submissions, a buffer or border zone requirement of any size would be maintained without sufficient scientific evidence within the meaning of Article 2.2 of the SPS Agreement. Further, Japan appears to contradict its own phraseology, noting in paragraph 51 of its second submission that its “border” zone in fact satisfies the definition of a “buffer zone.”

¹⁰Detailed Rules (June 30, 2004), § 1(1)(b).

¹¹Detailed Rules (June 30, 2004), § 1(2).

¹²See Japan Second Submission, para. 10.

¹³Japan First Submission, para. 10(vi).

Operational Criteria, when a blight strike is discovered in an orchard or block containing least-resistant varieties (thereby disqualifying the orchard), all adjoining orchards or blocks would similarly be disqualified unless the border/buffer zone meets this higher, more-restrictive standard (*i.e.*, that the zone be entirely free of potential host materials). Conversely, should a blight strike be observed on a tree of a more-resistant variety, adjacent blocks or orchards would not be disqualified if the disqualified block is surrounded by a 10 meter buffer zone free of fire blight (which could, theoretically, include host materials of the disease).

15. Of course, this discussion must boil down to the scientific evidence regarding “least-resistant” and resistant varieties of mature apple fruit and fire blight. Neither mature fruit from resistant varieties nor mature apple fruit from less-resistant varieties have ever been shown to contain internal populations of *E. amylovora* despite extensive studies conducted for this purpose. As a result, neither form of buffer zone is warranted by the scientific evidence. Japan’s attempt to impose varying requirements depending on variety are little more than further complications of the process for exporting apples, thereby discouraging exports.

Q6. *Under what circumstances/conditions would more than one inspection of an orchard be required? Where is this identified in Japan’s revised measures? (See US first submission, footnote 16; New Zealand first submission, footnote 13.)*

16. In its analysis of Japan’s revised measures, the United States noted that the description in the 2004 Detailed Rules of a confirmatory inspection by Japanese officials lacked certain explanatory text included in the earlier version of Japan’s measure. Whereas Japan’s 1997 Detailed Rules clearly stated that the confirmatory inspection to be conducted by Japan was to be “carried out *at the same time* with the inspection of the American authorities for the designation of the orchards prior to harvest,” Japan’s revised 2004 Detailed Rules contain no such qualifying statement, stating simply that a “Japanese official shall confirm the designated orchards with the US Authorities every year.”¹⁴ The United States noted in its first submission that this apparent lack of specificity and qualification for Japan’s revised confirmation inspection begs an interpretation of Japan’s 2004 Detailed Rules which permits Japan to conduct its confirmatory inspection at a later date than the U.S. inspection, effectively allowing for two inspections of the orchard.

Q7. *In its oral statement (paras. 32 and 33) the US refers to communications from Japanese inspectors regarding the occurrence of fire blight in US orchards. What are the dates of the inspections referred to in these communications? How do these communications relate to Japan’s new measures and the application of the Operational Criteria?*

17. The communications from Japanese inspectors, attached to Japan’s second submission as Exhibit JPN-15, relate to inspections conducted on August 26 and September 1, 1995. The

¹⁴See Detailed Rules (April 1, 1997), § 1(4); Detailed Rules (June 30, 2004), § 1(4).

statements are illustrative of how the inspection regime proposed in the Operational Criteria would be no more relaxed than the fire blight-free inspection/disqualification proposed in Japan's Detailed Rules of June 30, 2004 or fire blight-free inspections conducted by Japanese inspectors in the past (in this case, the summer of 1995). In short, the Operational Criteria would propose the disqualification of an orchard or export block when an inspector, in a buggy car, observes "readily observable" fire blight symptoms on an apple tree.¹⁵ This proposed inspection/disqualification bears an uncanny resemblance to the inspectors' descriptions of inspections under a fire blight-free regime. Under the fire blight-free regime in 1995, both Mr. Sotokawauchi and Mr. Kimura conducted buggy car inspections for visible signs of fire blight, disqualifying entire orchards on observation of a single fire blight strike.

Q8. *In para. 27 of its second submission, Japan makes reference to "American researchers' attempts to demonstrate possible introduction of fire blight bacteria through transpiration." Could the parties please indicate where further information on this attempt can be found?*

18. In its first submission, the United States described an experiment which its scientists conducted in response to Japan's Azegami study. Japan relies on Azegami as support for the conclusion that bacteria invade mature apple fruit through the fruit pedicel.¹⁶ Upon analyzing Azegami's results, the United States noted that the study only successfully introduced fire blight bacteria into the apple fruit through the pedicel when the pedicel and its abscission layer were severed. U.S. scientists noted that the flow of bacteria in Azegami (bacteria sucked into the apple fruit through a severed pedicel when a suspension of bacteria is placed directly on the wound) was equally as likely to be a result of the well known process of fruit transpiration as due to any active invasion of the apple fruit by fire blight bacteria. As noted in the U.S. second submission, transpiration is the process by which water evaporates from leaf and plant surfaces.¹⁷ In order to demonstrate that transpiration (rather than active invasion) could cause a suspension applied to the severed pedicel to be sucked into the apple fruit, U.S. researchers placed an inert dye (Methyl blue) on the cut pedicel of a mature apple fruit. Due to the non-living nature of the dye, it is incapable of "invading" an apple fruit. Nevertheless, the dye, like the bioluminescence in Azegami, entered the fruit and spread into the vascular bundles. This result could not be due to invasion, and could only be attributable to the dye being drawn into the fruit through transpiration.

19. In its second submission, Japan attempts to cast the U.S. dye study as an example of an additional route for fire blight passage into mature apple fruit – unique from that observed in

¹⁵See Japan First Submission, para. 57.

¹⁶See, e.g., Kimura *et al.*, p. 13, lines 13-15. As noted in several places by the United States, Azegami's results in fact support the opposite conclusion – that bacteria do not enter the apple fruit through fruit bearing branches. (Exhibit JPN-10). See Azegami *et al.*, p. 9. first full paragraph. (Exhibit JPN-6).

¹⁷See U.S. Second Submission, fn. 34.

Azegami.¹⁸ To the contrary, the U.S. study is evidence that the very results described in Azegami are more likely a result of this mechanical process (transpiration) than from some form of active fruit invasion, as alleged by Japan. The results and a synopsis of the U.S. experiment are contained in Exhibit USA-21.

20. In the course of evaluating a previous Japanese cut-pedicle study, the experts also confirmed that transpiration (resulting from the artificial severing of the pedicle) would likely be the means of bacteria being drawn into the apple fruit. For example, Dr. Hale commented that “[i]f you cut the surface (of the pedicle) and you put a pure suspension of *E. amylovora* on that cut surface then it is likely to be sucked into the vascular system.”¹⁹

Q9. *According to the provisions of Japan’s Detailed Rules on post-harvest cold treatment, facilities are required to be kept at a temperature of 0.6 degrees Celsius (item 2(1)a, in Exhibit JPN-2). To what extent are the results of the Tsukamoto study (2005a) relevant given this post-harvest requirement? At what temperature are post-harvest apples currently kept in the US during storage and during shipping? Are there any exceptions?*

21. Section 2(1)a of Japan’s Detailed Rules specify that fruit for export be held at 2.2C +/- 0.6 degrees, or within the range of 1.6C to 2.8C. While these temperatures are colder than the 5C storage temperature reported in Tsukamoto *et al.*, the potential for this having a significant effect on the survival of *E. amylovora* within inoculated fruit is likely to be small. However, in Tsukamoto *et al.*, the artificially inoculated fruit were held under conditions of high relative humidity (in enclosed steel or plastic boxes) for 9 days at 25C before being placed under refrigeration at 5C. It has long been recognized that a delay in cooling of this magnitude would have a severely deleterious effect on the quality and storability of commercial apple fruit. According to Hardenberg *et al.* (1986)²⁰, “[i]t is essential that apples be cooled as quickly as possible after harvest. Apples are not injured by rapid cooling. A delay of 1 day at 21C after harvest takes 7 to 10 days off the potential storage life at 0C. A delay of 3 days in the orchard or in a warm packing shed may shorten their storage life by as much as 30 days, even if they are then stored at -1C.” The results of Tsukamoto *et al.* cannot be presumed to predict what will happen under commercial conditions for the following reasons:

1. Commercial apple fruit are not wounded and artificially inoculated after harvest.
2. Commercial apple fruit are cooled to storage temperature (-1C to 4C, but more fruit are stored at 0-2C) as quickly as possible, with nearly all of the apple fruit being placed into refrigerated storage within 24 hours of harvest. In other words,

¹⁸See Japan Second Submission, para. 27.

¹⁹Panel report, Annex 3, para. 140. (Parenthetical inserted).

²⁰Hardenberg, R.E. *et al.*, The Commercial Storage of Fruits, Vegetables and Florist and Nursery Stocks, Agriculture Handbook No. 66, United States Department of Agriculture.

they are not subjected to the 9-day incubation period as was the case with the apple fruit in Tsukamoto *et al.*

3. Development of fire blight disease (whether pre-harvest, post-harvest, via latent infection or through multiple symptom expression) in mature, symptomless apple fruit is not known to exist.
4. Multiple scientific papers (Roberts, 1989, 2000; Dueck, 1974) have reported the absence of *E. amylovora* inside thousands of mature, symptomless apple fruit (including the stem when present, vascular tissues, cortex tissues and calyx tissues when present) harvested from or adjacent to severely blighted trees, indicating that the phenomenon of infection through the pedicel described in Azegami *et al.* (Exhibit JPN-6) and Tsukamoto *et al.* (Exhibit JPN-8) is an artifact of laboratory experimentation that is not found in the real world of apple fruit in commerce.

Q10. *In the 2004 PRA (p. 19), Japan makes reference to potential infection via apple fruit boxes. Is there any evidence that infected fruit boxes may infect fruit that is shipped in these boxes? Please document.*

22. As a preliminary point, fruit boxes cannot be infected with anything as they are not living entities. Also, modern post-harvest handling procedures long ago abandoned wooden crates used in the mid-20th century for new (unused), disposable, assembled-as-needed boxes made of cardboard which have no opportunity to become contaminated with *E. amylovora*. In light of the U.S. apple industry's use of previously unused crates, there is no possibility of the events described in page 19 of Japan's PRA actually occurring (*i.e.*, containers previously contaminated by exposure to pears harvested from blighted orchards being re-used for harvesting apple fruit for export to Japan).

23. Speculation and anecdotal postulations have been published about the source of inoculum for the first outbreak of fire blight in England in the 1950s. Infected fruit and contaminated honey bees were dismissed by Lelliot as being highly improbable, with the re-use of contaminated boxes or infected budwood/nursery stock seeming more probable. There is no surviving evidence that will ever allow confirmation of the means by which fire blight was introduced into England, and there will never be such evidence despite the recent efforts of Billings and Barrie (2002) to discuss purely conjectural and circumstantial evidence that there was a "possibility that there was a greater risk than usual in 1955 of blighted pears (and hence, contaminated fruit boxes) being imported from the USA."²¹ Billings and Barrie present no evidence that such an event occurred, and no new evidence was presented to facilitate evaluation of any of the other suggested means of dissemination. The strongest statement the authors could

²¹Billings, E. and Barrie, A.M. (2002), A Re-Examination of Fire Blight Epidemiology in England, Proc. 9th Intl. Workshop on Fire Blight, Acta Horticulturae 590: 61-67.

make about the “evidence” was “[t]he possibilities suggested rely heavily on *circumstantial evidence* but they cannot be ruled out.”

24. The experts confirmed the anecdotal and unsubstantiated nature of the conclusions in Lelliot and Billings and Barrie. For example, Dr. Hale noted that “[s]uggestions that the disease might have been introduced on infected plant material or on contaminated fruit crates had never been proved.”²² Dr. Geider commented that “there was no evidence that fruit cargo crates distributed fire blight.”²³ Dr. Hayward noted that “[e]xperiments (Keck et al. 1996) showing survival of *E. amylovora* on pieces of wood and plastic in petri dishes do not relate to conditions under which fruit crates are stored and transported. Dried bacterial ooze on crate surfaces would be subject to the effects of dessication, diurnal temperature variation when not kept in cold storage, and probably to the deleterious effects of exposure to UV radiation,”²⁴ and that “he had found no evidence regarding the ability of fruit cargo crates to spread fire blight.”²⁵ Finally, Dr. Smith stated that “[t]he explanation involving fruit crates seemed to be based entirely on circumstantial evidence and did not prove inherently very probable. . . . Although this idea had been presented in the literature because of an old British suggestion on the subject, no European country had judged it necessary to establish phytosanitary measures for crates (such as the Japanese requirement of chlorine treatment of containers for harvesting).”²⁶ In short, he found that “there was no direct evidence of the spread of fire blight by fruit cargo crates.”²⁷

11. *Is there any evidence that fire blight infection has been spread through packing/sorting lines to uninfected fruit?*

25. There is no scientific evidence to support the suggestion that apple fruit have ever been inoculated by and developed fire blight disease as a result of exposure to packing/sorting/packaging line equipment.

26. Regarding post-harvest procedures generally, which would include the disinfection/disinfestation of packing facilities to mitigate this hypothetical risk, the experts noted that there was no evidence to suggest that the contamination of fruit was likely due to packing facilities.²⁸ After reviewing fire blight literature, one expert noted that he had not found any evidence regarding the contamination of mature apple fruit by harvest labour or other means in an orchard where a source of contamination existed.²⁹ Further, one expert noted that “any

²²Panel Report, para. 6.33.

²³Panel Report, para. 6.166.

²⁴Panel Report, para. 6.34.

²⁵Panel Report, para. 6.168.

²⁶Panel Report, para. 6.35.

²⁷Panel Report, para. 6.169.

²⁸Panel Report, para. 6.145 (Dr. Hale).

²⁹Panel Report, para. 6.147 (Dr. Hayward).

possible level of contamination of mature fruits arising from any of these [post-harvest process] points would not be of an order of magnitude that would make any significant difference to the ultimate possibility of survival on the fruits and transmission to susceptible host.”³⁰

To Japan:

Q20. *Japan has submitted a corrigendum to page 23 of Exhibit JPN-10 (see para. 39 of Japan’s second submission) regarding the possibility estimates of introduction of fire blight in response to US comments in paras. 30-31 of its second submission. Explain the corrigendum. What implications does this have, if any, for the conclusions of the September 2004 PRA?*

27. The United States noted in its second submission that the Kimura study proposed a probability estimate for introduction of fire blight into Japan via apple fruit that was almost four times greater than the risk posed through importation of infected nursery stock (a recognized source of fire blight).³¹ This remarkably high estimate is due in part to Kimura’s unrealistic methodology (such as assuming that 100 percent of imported fruit are infected³² and that 10 percent of trash discarded out of doors will consist of apple fruit³³), coupled with the study’s reliance on several unsupported conclusions drawn from the Azegami and Tsukamoto studies (e.g., “[t]he possibility of infection of fruit from pedicels through fruit bearing branches was experimentally established by study of Azegami et al. for the first time in the long history of the study of fire blight”³⁴).

28. Japan acknowledged the U.S. analysis in its second submission, and proposed the corrigendum as in some way altering or clarifying the results in Kimura. However, upon a reread of Kimura the renaming of nursery stock to “Scenario 1”, scions/buds to “Scenario 2”, and apple fruit to “Scenario 3” still presents the same hierarchy of likelihood as described by the United States. According to Kimura, as clarified by the corrigendum, apple fruit still present almost four times the risk of introducing fire blight into Japan (once every 565 years) than nursery stock (once every 1,898 years).³⁵

³⁰Panel Report, para. 6.148 (Dr. Smith). (Parenthetical inserted).

³¹See Kimura *et al.*, p. 23, lines 1-3.

³²Kimura *et al.*, p. 14, line 10.

³³See equation set out at Kimura *et al.*, p. 18, line 25. The equation’s multiplier represents the probability of trash being thrown outdoors, taking into account the assumption that 10% of garbage is disposed of outside. This number is then multiplied by 25% – the percentage presumed to be representative of the amount/portion of apple fruit discarded by consumers (i.e., consumers eat the other 75 percent of the fruit). As a result, the construct of the equation assumes that all of the garbage disposed of outside consists of apple fruit.

³⁴Kimura *et al.*, p. 13, lines 13-15. As noted in several places by the United States, Azegami’s results in fact support the opposite conclusion – that bacteria do not enter the apple fruit through fruit bearing branches. See Azegami *et al.*, p. 9. first full paragraph.

³⁵See Kimura *et al.*, p. 23, lines 1-7, pp.10-11 (apparently setting out the different “Scenarios” referred to in the corrigendum).

To the United States:

Q24. *Could the United States clarify to what extent its claims under Article 5.6 SPS fall within the three-pronged test defined by the Appellate Body in its report on Australia – Salmon (para. 121)?*

29. As noted by the United States in its first submission, the Appellate Body in *Australia – Salmon* found that in order to raise a successful claim under Article 5.6 of the SPS Agreement, the complaining party must demonstrate that (1) a measure exists that is “reasonably available taking into account technical and economic feasibility”; (2) the measure must achieve “the Member’s appropriate level of sanitary and phytosanitary protection”; and (3) the measure must be “significantly less restrictive to trade than the SPS measure contested.”³⁶

30. The United States proposed an alternative measure that satisfies each of the three elements of this test – a Japanese restriction of imported fruit to mature fruit. The United States will briefly recap how this alternative measure satisfies each prong of the test in order.³⁷

31. First, a measure restricting imports to mature apple fruit is reasonably available taking into account technical and economic feasibility because U.S. commercial quality controls and Federal and State laws and regulations already ensure that export apple fruit are mature. The alternative measure of restricting imports to mature apple fruit would enable U.S. apple growers to utilize the industry practices already in effect and which are already utilized to meet the export requirements of almost every U.S. export market. These practices ensure that exported U.S. apple fruit are what they have always been – mature, symptomless apple fruit. Therefore, a restriction of apple fruit exports to mature apple fruit is a measure that is reasonably available, taking into account technical and economic feasibility.

32. Second, a measure restricting imports to mature apple fruit achieves Japan’s appropriate level of phytosanitary protection – a level of protection that would allow Japan to prevent the introduction of fire blight into Japan and maintain its fire blight-free status.³⁸ This level of protection may be met/achieved by a measure equivalent to an import prohibition. In light of the scientific evidence relating to mature apple fruit and fire blight, a restriction of imported apple fruit to mature apple fruit would be an equivalent measure to an import prohibition, thereby

³⁶Appellate Body Report, *Australia – Measures Affecting Importation of Salmon*, AB-1998-5, adopted 6 November 1998, para. 194. The United States assumes that per the above question soliciting information on the U.S. Article 5.6 argument, the Panel is referring to the three-prong Article 5.6 test set out in paragraph 194 of the *Australia – Salmon* Report. If, however, the United States is incorrect and the Panel is in fact inquiring as to the U.S. Article 5.1 argument (*Australia – Salmon*, paragraph 121 sets out the three requirements of a risk assessment), the United States respectfully requests the opportunity to respond accordingly.

³⁷A more-detailed description of how an alternative measure restricting imports to mature apple fruit meets the requirements of Article 5.6 and the three-prong test may be found in the U.S. First Submission, paras. 34-49.

³⁸See U.S. First Submission, fn. 84.

achieving Japan’s appropriate level of protection.

33. Third, a measure restricting imports to mature apple fruit satisfies the third prong of the Article 5.6 test because it is significantly less restrictive to trade than Japan’s current import regime, which consists of nine onerous elements, including inspection, a requirement of fire blight-freedom in orchards and buffer zones, and several other post-harvest restrictions. The restrictiveness of Japan’s current regime is highlighted by the fact that, pursuant to its demands, there are numerous scenarios in which mature apple fruit – which would not present a risk of introduction of fire blight into Japan – are nonetheless disqualified for export to Japan. For instance, despite making every effort to meet the import regime’s onerous requirements, the discovery of a single fire blight strike in a buffer zone or on a tree in the orchard will disqualify the entire orchard or export block from export to Japan. By comparison, the proposed alternative measure of restricting imports to mature apple fruit is significantly less trade-restrictive. Pursuant to its requirements, there would be no need for orchard inspections.

Q25. Could the United States confirm whether it considers the alternative measure mentioned in para. 48 of its first submission as a mere example or as an alternative measure to restricting exports to mature apples, which would meet Japan’s appropriate level of protection, within the meaning of Article 5.6 SPS?

34. The United States argues that an Article 5.6 alternative measure that meets Japan’s appropriate level of protection is a Japanese restriction of imports to mature apple fruit. As demonstrated in the U.S. Answer to Question 24 above, this alternative measure satisfies each of the three prongs of the test under Article 5.6.

35. However, the United States notes that the fact that Japan’s fire blight measures are more trade-restrictive than necessary, and that as a result there are less trade-restrictive alternatives available, may be emphasized through a comparison of Japan’s current import regime to the range of reasonably available measures that are less trade-restrictive, are technically and economically feasible, and would more than achieve Japan’s appropriate level of protection. Alternatives could include requiring that imported mature fruit be accompanied by a declaration on the export certificate that, pursuant to current sampling protocols, zero immature fruit were detected in the shipment. Alternatively, apple fruit for export to Japan could be subjected to additional maturity testing, as proposed by the United States during reasonable period of time negotiations with Japan. Pursuant to this testing program, should a hypothetical shriveled fruit be detected in a lot for shipment to Japan, the fruit would be subjected to starch/iodine testing to determine whether the shriveling was due to apple fruit immaturity. Should it be determined that the shriveling was a result of apple fruit immaturity, the lot would be disqualified for export to Japan.³⁹ In addition, an alternative might include the import of mature apple fruit coupled with a

³⁹These additional steps would be further assurances that the exported fruit would be mature apple fruit. The United States stresses, however, that its current industry practices are such that we simply do not encounter shriveled or immature fruit at the “end of the line”, *i.e.*, once harvested fruit have been subjected to the numerous

phytosanitary certificate.

36. Again, because the scientific evidence establishes that billions of apple fruit have never transmitted fire blight and mature, symptomless apple fruit are not a pathway for the disease, any of these less trade-restrictive alternatives would more than achieve Japan’s appropriate level of protection – although, for the same reason they would also be more trade-restrictive than necessary.

Q26. *Please clarify whether current commercial practices are also requirements under U.S. law. Are the criteria established in the OECD guidelines and/or electronic scanning required by U.S. law or are these only commercial practices? Please explain how these relate to the US Export Apple Act.*

37. The OECD Guidance on Objective Tests for Determining the Ripeness of Fruit incorporates the quality control methods long established and used by the U.S. apple fruit industry for determination of fruit maturity. Industry practices, including those specified in the OECD guidelines (applied pre- and post-harvest), as well as employing accurate electronic scanning and weighing devices, help to explain why exported U.S. apple fruit are what they have always been – mature, symptomless apple fruit. While not requirements under U.S. law, these industry practices are driven by demanding commercial considerations and are implemented to ensure that fruit leaving U.S. packing houses are of uniform quality and meet exacting foreign standards. The U.S. Export Apple Act defines the minimum quality standards for exported apple fruit. Industry practices then ensure that exported fruit meet or exceed the requisite standards.

38. These practices are standard in the industry because of the competitive need to ensure that apples are uniformly of the highest possible commercial quality. As described previously, ensuring high quality involves distinguishing among fruit that are commercially mature (at a level of maturity desired by consumers and well past the stage of physiological maturity), the relevant level for the discussion of fire blight and mature apple fruit. Physiological maturity is taken as a given; as described in the “Pre-Harvest and Post-Harvest Storage, Grading, and Handling Practices of Apples,” harvesting and delivering physiologically immature fruit would potentially mean rejection of the delivery and commercial disaster. Maturity testing in the orchard pre-harvest and at the packing facility post-delivery are specifically conducted to ensure that fruit are mature. The quality control processes such as mechanical screening, optical scanning and weighing then act as extra assurances that a hypothetical immature fruit would not be exported. In addition, any hypothetically immature fruit would be prone to shrivel during storage, prone to development of physiological disorders such as storage scald and bitter pit, and would possess poor eating quality. Any of these quality problems would lead to rejection of the apple fruit by importing countries, and are therefore unacceptable from a commercial standpoint. As a result, it is the strong commercial incentive to provide uniformly high quality commercially mature fruit which has led to the various practices currently employed by the U.S. apple

quality controls currently utilized by the U.S. apple industry.

industry.

Q27. *Having regard to paras. 31 and 48 and footnotes 89 and 90 of the US first submission, does the US legislation applicable to exported apples require chlorine treatment of apples?*

39. U.S. legislation applicable to exported apple fruit does not require the treatment or disinfestation of apple fruit with chlorine. Rather, in this case, chlorine dip is only required insofar as it is part of the work plan for the export of U.S. apple fruit to Japan. The chlorine dip step for exported U.S. apple fruit is in place in order to meet Japan's requirements as set out in its Detailed Rules.⁴⁰

Q28. *Please comment on Japan's assertion that the requirement of disinfestation of packing facilities "is a normal requirement in any process"? (Japan oral statement, para. 85)*

40. For purposes of apple exports to Japan, facility disinfestation, like chlorine dip, is part of a work plan. As with chlorine dip, U.S. industry must disinfest its packing facilities in order to meet the requirements of Japan's Detailed Rules.⁴¹

41. Facility disinfestations are not standard in the U.S. apple industry. It is not, as Japan contends, a "normal requirement" in the U.S. apple industry, let alone "a normal requirement in any process." Moreover, as noted in the U.S. second submission, measures relating to apple fruit and fire blight are not, for purposes of the SPS Agreement, legitimate SPS measures simply because they are "normal requirements" or standard practices.⁴² Even measures alleged to be normal or standard industry practice must be maintained with sufficient scientific evidence within the meaning of Article 2.2 of the SPS Agreement. In the case of apple fruit and fire blight, the scientific evidence does not establish that mature apple fruit will harbor epiphytic populations of bacteria capable of initiating fire blight disease. Further, there is no scientific evidence that apple fruit intended for export have ever been or are likely to be epiphytically contaminated with fire blight or fire blight-causing bacteria in packing houses, much less that such contamination could then result in the introduction of fire blight in Japan. Therefore, a facility disinfestation requirement, enforced under the auspices of preventing the hypothetical epiphytic spread of the disease, bears no rational or objective relationship to the scientific evidence.

⁴⁰See Detailed Rules (June 30, 2004), § 5(1)(C) ("Fresh apple fruits shall be treated with dipping them in the solution of sodium hypochlorite (100 ppm or more chlorine is available) for more than one minute for the purposes of the sterilization of those fresh apple fruits against fire blight"). (Exhibit USA-3); MAFF Notification No. 354, para. 4(3) ("As a treatment for fire blight, the fruit surface must be sterilized.")

⁴¹See Detailed Rules (June 30, 2004), § 3(2)(C) (the interior of the packing facility "shall be disinfested with solution of sodium hypochlorite etc. prior to the use and whenever necessary.")

⁴²See U.S. Second Submission, para. 46.

Q29. *In para. 50 of its second submission the United States argues that it has never exported anything other than mature, symptomless apple fruit. In paras. 44 and 64 of its second submission, Japan makes reference to evidence that the quality control in the United States failed once in the case of a shipment of blighted pears to Hawaii in 1965. How similar are U.S. procedures in terms of exports of pears and apples? Have they evolved significantly since 1965?*

42. Commercial controls on pear fruit, as well as apple fruit, have evolved significantly since 1943 when the anecdotal shipment of pear fruit allegedly arrived in Hawaii.⁴³ In the 1940s fruit, in particular pear fruit, was often packed directly in the orchard (“field packing”) and packing facilities were used simply for cold storage purposes. Since that time, packing facilities have evolved to play a much greater role vis-a-vis quality controls and quality controls themselves have become much more sophisticated. For instance, sophisticated equipment such as optical scanners only became available to the apple industry in the last decade, some fifty years after the Hawaii pear shipment. Today, apple and pear picking, packing, storage and shipping procedures are generally the same.

43. It is important to note that, despite this anecdotal story regarding a diseased shipment of pear fruit, there remains no evidence that quality controls for exported apple fruit have ever failed vis-a-vis shipments of mature, symptomless apple fruit. Even in the 1940s, when quality controls were less technologically advanced and sensitive, there was no evidence that the United States was shipping anything other than mature, symptomless apple fruit.

Q30. *Please document your statement that “. . . no shipments of US apple fruit have been rejected by foreign importers due to either immaturity or symptoms of fire blight”. (US oral statement, para. 39)*

44. The United States researched relevant databases and interviewed pertinent U.S. Government and industry officials in order to determine, to the best of its ability, whether exports of U.S. apple fruit had ever been rejected by foreign importers for reasons of either immaturity or infection/infestation with fire blight. Our search failed to uncover any evidence of either occurrence.

45. First, the United States Department of Agriculture (“USDA”) accessed its Foreign Notice of Non-Compliance database. This database, which USDA is in the course of computerizing, contains a limited time period of electronic entries, but paper records of export non-compliance/rejection date back to the 1950s. These paper records are on file at USDA/APHIS headquarters. In order to perform as thorough a search as possible in the limited time available, USDA officials checked computerized records and queried regional specialists regarding whether they were aware of non-compliance reports contained in the hard copy records

⁴³While the article presented by Japan was written in 1965, the shipment described in the article arrived in Hawaii in 1943.

indicating the rejection of shipments of U.S. apple fruit for either immaturity or fire blight. Neither the individuals interviewed nor records reviewed indicated that U.S. apple exports had ever been rejected for immaturity or fire blight.⁴⁴

⁴⁴The United States has attached a redacted example of a non-compliance report as Exhibit USA-23.