

**JAPAN – MEASURES AFFECTING
THE IMPORTATION OF APPLES**

Recourse to Article 21.5 of the DSU by the United States

Report of the Panel

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I. INTRODUCTION

1.1 On 10 December 2003, the Dispute Settlement Body ("DSB") adopted its recommendations and rulings in the dispute *Japan - Measures Affecting the Importation of Apples* (the "*Japan – Apples* Panel Report").¹ Having found Japan's phytosanitary measure for imported US apples to be inconsistent with its obligations under the Agreement on the Application of Sanitary and Phytosanitary Measures ("SPS Agreement"), the DSB recommended that Japan bring its measure into conformity with that agreement. On 30 January 2004, the United States and Japan concluded an agreement pursuant to Article 21.3(b) of the Understanding on Rules and Procedures Governing the Settlement of Disputes ("DSU")² that the reasonable period of time available to Japan to implement the DSB's recommendations and rulings would expire on 30 June 2004.

1.2 On 19 July 2004, the United States requested authorization from the DSB to suspend tariff concessions and other related obligations with respect to Japan under the General Agreement on Tariffs and Trade 1994 (GATT 1994), pursuant to Article 22.2 of the DSU.³

1.3 At the meeting of the DSB held on 30 July 2004, Japan informed the DSB that it had amended its measures on 30 June 2004 to implement the DSB's recommendations and rulings within the reasonable period of time. At the same meeting, the United States requested the establishment of a panel pursuant to Article 21.5 of the DSU. The DSB agreed that the Article 21.5 request be referred to the Original Panel. The DSB also agreed, at the request of Japan, that the matter would be referred to arbitration to determine the level of suspension of concessions, pursuant to Article 22.6 of the DSU. Japan and the United States agreed that the arbitration proceedings would be suspended until after the adoption of the panel report under Article 21.5. If the Article 21.5 Panel found that Japan had acted inconsistently with its WTO obligations, then the Article 22.6 arbitrator would automatically resume its work.

1.4 Australia, Brazil, China, the European Communities, New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu reserved their third-party rights to participate in the Article 21.5 proceedings.

A. TERMS OF REFERENCE

1.5 The following standard terms of reference applied to the work of the Panel:

"To examine, in the light of the relevant provisions of the covered agreements cited by the United States in document WT/DS245/11, the matter referred to the DSB by the United States in that document and to make such findings as will assist the DSB in making the recommendations or in giving the rulings provided for in those agreements."⁴

B. PANEL COMPOSITION

1.6 The Panel was composed as follows:

Chairman: Mr Michael Cartland

¹ WT/DS/245.

² WT/DS245/9.

³ WT/DS245/12.

⁴ WT/DS245/14.

Panelists: Mr Christian Häberli
Ms Kathy-Ann Brown

1.7 The Panel met with the parties and third parties on 28 October 2004. The Panel consulted scientific and technical experts and met with them on 12 January 2005. The Panel held a second meeting with the parties on 13 January 2005.

1.8 The Panel issued its interim report on 10 March 2005. The Final Report was circulated to the parties on 21 April 2005. The report was circulated to Members in all three languages [15 June 2005].

II. FACTUAL ASPECTS⁵

A. THE DISEASE

1. Fire blight (*Erwinia amylovora*)

2.1 *Erwinia amylovora* (*E. amylovora*), the scientific name for the fire blight bacterium, was first reported in 1793. Symptoms of infection of host plants with fire blight depend on the parts infected. Infected flowers, shoots and twigs wither, darken, and die. As shoots and twigs wither, they bend downwards resembling a shepherd's crook. Infected leaves take on a curled, scorched appearance. Infected fruit do not develop fully, turning brown to black, shrivelling, and becoming mummified, frequently remaining attached to the limb. Limbs and trunks of trees may also develop cankers, which, if disease development is severe, may result in plant death.

2.2 The most serious primary infection with fire blight is an over-wintering canker developed in the previous season. Fire blight bacteria over-winter exclusively in infected host plants. In the presence of warm, wet conditions in spring, the disease cycle begins when cankers on infected hosts exude a bacterial-laden ooze or inoculum. This inoculum is transmitted primarily through wind and/or rain and by insects or birds to open flowers on the same or new host plants. The bacteria may spread within the host plant, causing disease in blossoms and fruiting spurs, twigs, branches, or leaves.

2.3 The fire blight disease affects numerous host plants of the Rosaceae family, including both cultivated and native wild plants. Fruit tree hosts include apples (genus *Malus*), pears (genus *Pyrus*), quince (genus *Cydonia*), and loquats (genus *Eriobotrya*). Important host plants used in hedges and gardens include genera *Cotoneaster*, *Crataegus* (hawthorn), *Pyracantha* (firethorn), and *Sorbus* (mountain ash), although individual species may not serve as hosts.

2. Relevant technical and scientific terms

Abscission layer

2.4 The barrier of cells that develops across the stem at the base of a fruit as it approaches the time of falling from a plant. This specialized layer acts as the breaking point for separating the plant from its fruit.

⁵ The following description of the disease and list of defined terms has been adapted from the Original Panel report on *Japan – Apples* (WT/DS245/R).

Bioluminescence

2.5 The emission of light by living organisms.

Buffer zone

2.6 An area in which a specific pest does not occur or occurs at a low level and is officially controlled, that either encloses or is adjacent to an infested area, an infested place of production, a pest free area, a pest free place of production or a pest free production site, and in which phytosanitary measures are taken to prevent spread of the pest.

Canker

2.7 A lesion on the bark of a tree or shrub caused by infection. Fire blight cankers on limbs, stem, and trunks appear as sunken, discoloured areas that often exhibit deep cracks in the bark at the margins of the canker. A hold-over canker is one in which the pathogen may survive the winter and, if survival occurs, from which the inoculum for primary infections the following spring originate.

Desiccation

2.8 The process of becoming dried up.

Disease (of plant)

2.9 A disorder of structure or function in a plant of such a degree as to produce or threaten to produce detectable illness or disorder; a definable variety of such a disorder, usually with specific signs or symptoms.

Endophytic and epiphytic

2.10 With respect to *E. amylovora*, the term endophytic is used when the bacterium occurs inside a plant or apple fruit in a non-pathogenic relationship. The term epiphytic is used when the bacterium occurs on the outer surface of a plant or fruit in a non-pathogenic relationship.

Entry, establishment and spread (of a pest)

2.11 Entry refers to the movement of a pest into an area where it is not yet present, or present but not widely distributed and being officially controlled. Establishment means the perpetuation, for the foreseeable future, of a pest within an area after entry. Spread refers to the expansion of the geographical distribution of a pest within an area.

Infection

2.12 When an organism (e.g., *E. amylovora*) has entered into a host plant (or fruit) establishing a permanent or temporary pathogenic relationship with the host.

Infestation

2.13 Refers to the presence of the bacteria on the surface of a plant without any implication that infection has occurred.

Inoculum

2.14 Material consisting of or containing bacteria to be introduced into or transferred to a host or medium. Inoculation is the introduction of inoculum into a host or into a culture medium. Inoculum can also refer to potentially infective material available in soil, air or water and which by chance results in the natural inoculation of a host.

Pathogen

2.15 Micro-organism causing disease.

Pedicel

2.16 A short, thin stalk often associated with a stalk that supports a single flower.

Scion

2.17 A detached shoot or twig of a plant used for grafting.

Spur

2.18 A short branch of the tree that flowers and produces fruit.

Transpiration

2.19 The evaporation of water from plants.

Vector

2.20 An organism able to transport and transmit a pathogen.

B. JAPAN'S FIRE BLIGHT MEASURES

2.21 The following pieces of Japanese legislation are relevant to this dispute:

- Plant Protection Law No. 151 enacted on 4 May 1950 (and specifically Article 7 thereof);
- Plant Protection Law Enforcement Regulations enacted on 30 June 1950 (and specifically Article 9 and Annexed table 2 thereof);
- Ministry of Agriculture, Forestry and Fisheries (MAFF) Notification No. 354 dated 10 March 1997; and
- MAFF Administrative Directive, "Detailed Rules for Plant Quarantine Enforcement Regulation Concerning Fresh Fruit of Apple Produced in the United States of America " dated 30 June 2004 ("Detailed Rules"). This replaced the MAFF Directive "Detailed Rules for Plant Quarantine Enforcement Regulation Concerning Fresh Fruit of Apple Produced in the United States of America " dated 29 January 2002.⁶

2.22 Japan's conditions for the importation of apple fruit from the United States are as follows:

⁶Detailed Rules for Plant Quarantine Enforcement Regulation Concerning Fresh Fruit of Apple Produced in the United States of America (June 30, 2004) (Exhibit JPN-1).

- (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. Currently, the designation is accepted only for orchards in the states of Washington and Oregon;
- (b) The export orchard must be free of plants with fire blight symptoms;
- (c) The fire blight-free orchard must be surrounded by a buffer zone (or border zone) of around ten-meters, free of fire blight symptoms;
- (d) The orchard and surrounding buffer zone must be inspected once per year at early fruitlet stage. Detection of a blighted tree in this area by inspection will disqualify the orchard;
- (e) Harvested apples must be treated with surface disinfection by soaking in sodium hypochlorite solution;
- (f) The interior of the packing facility must be disinfected 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 packing facilities.

C. INTERNATIONAL STANDARDS, GUIDELINES AND RECOMMENDATIONS

2.23 As in the Original Panel, the parties referred specifically to the International Standard for Phytosanitary Measures (ISPM) 11 on Pest Risk Analysis for Quarantine Pests, adopted in 2004.⁷ ISPM 11 describes the PRA process as consisting of three stages. Stage one involves (a) the identification of a pathway, usually an imported product, that may allow the introduction and/or spread of quarantine pests, and (b) the identification of a pest that may qualify as a quarantine pest. Stage two considers the identified pests individually and examines, for each one, whether the criteria for quarantine pest status are satisfied, that is, that the pest is of "potential economic importance to the area endangered thereby and not yet present there, or present but not widely distributed and being officially controlled". Based on the information gathered under stages one and two, stage three determines the appropriate phytosanitary measure(s) to be adopted. The three stages are summarized in the PRA Guideline as: "initiating the process for analysing risk", "assessing pest risk" and "managing pest risk", respectively.

III. CLAIMS OF THE PARTIES

3.1 The **United States** recalled that on 10 December 2003, the DSB adopted its recommendations and rulings in the dispute *Japan – Apples* and found that Japan's phytosanitary measure on imported US apples was inconsistent with Articles 2.2 and 5.1 of the *SPS Agreement*. Two sets of conclusions about the scientific evidence had been central to these findings. First, the DSB concluded that the scientific evidence did not establish that mature, symptomless apple fruit:

⁷ *International Standard for Phytosanitary Measures No.11: Pest Risk Analysis for Quarantine Pests including Analysis of Environmental Risks and Living Modified Organisms*, FAO, Rome 2004.

- (a) would be infected by fire blight;
- (b) would harbour endophytic populations of the fire blight-causing bacteria, *E. amylovora*; or
- (c) would harbour epiphytic populations of bacteria capable of transmitting fire blight.

Second, the DSB concluded that the scientific evidence did not establish that apple fruit – whether mature or immature – would serve as a means or pathway of introduction of fire blight to a fire blight-free area.

3.2 The United States claims that Japan had not brought its phytosanitary measure into conformity with the DSB's recommendations and rulings by 30 June 2004 when the reasonable period of time for Japan to comply with its obligations had expired. To the contrary, Japan had issued a set of phytosanitary measures remarkably similar to the elements of its previous WTO-inconsistent apple import regime.

3.3 The United States claims that Japan's revised measures on the importation of apple fruit fail to comply with the DSB recommendations and rulings and with Japan's obligations under the *SPS Agreement* in that:

- Japan has failed to ensure that its fire blight measures are not maintained without sufficient scientific evidence and these measures are therefore inconsistent with Article 2.2 of the *SPS Agreement*;
- Japan has failed to ensure that its fire blight measures are based on an assessment of the risks to plant life or health and therefore these measures are inconsistent with Article 5.1 of the *SPS Agreement*; and
- Japan has failed to ensure that its fire blight measures are not more trade-restrictive than required to achieve its appropriate level of phytosanitary protection, taking into account technical and economic feasibility, and these measures are therefore inconsistent with Article 5.6 of the *SPS Agreement*.

3.4 The United States further claims that Japan has acted inconsistently with its obligations under Article XI of GATT 1994 and under Article 4.2 of the Agreement on Agriculture.

3.5 **Japan** argues that the United States has not established a *prima facie* case in respect of the claims it has made. Amendments to Japan's import regime for US apple fruit as compared to the measures in place at the time of the Original Panel had resulted in

- a reduction of inspection from three inspections to one inspection;
- a reduction of buffer zone (or border zone) from 500 to ten meters; and
- the elimination of the requirement that crates be disinfected.

3.6 Japan claims its measure is fully consistent with Articles 2.2, 5.1, and 5.6 of the *SPS Agreement*. In addition, Japan claims that given the consistency with the relevant articles of the *SPS Agreement*, its measure is also consistent with Article XI of GATT 1994 and Article 4.2 of the Agreement on Agriculture.

[Parties and Third Parties' Arguments, Consultations with Experts, and Annexes deleted from this version.]

VII. INTERIM REVIEW

A. INTRODUCTION

7.1 On 24 March 2005, Japan and the United States requested the Panel to review, in accordance with Article 15.2 of the DSU, precise aspects of the interim report that had been issued to the parties on 10 March 2005. Neither Japan nor the United States requested a further meeting with the Panel. On 31 March 2005, in accordance with our timetable, both parties submitted comments on each other's communications of 24 March 2005.

7.2 What follows is a discussion of the arguments made at the interim review stage, in application of Article 15.3 of the DSU.

7.3 The Panel has modified aspects of its report in light of the parties' comments where it considered it appropriate, as explained below. Consequently, the findings of the Panel have to be read in conjunction with this section.

7.4 The Panel has also made certain editorial modifications either at the suggestion of the parties or of its own initiative for the purpose of clarity and accuracy.

7.5 References to paragraph numbers relate to those in this final report.

B. ORIGINAL COMMENTS OF THE UNITED STATES AND COMMENTS BY JAPAN ON THE UNITED STATES' ORIGINAL COMMENTS

7.6 The United States has requested us to modify the description of the nature of Japan's Operational Criteria made in the second sentence of paragraph 8.19 in order to match the description in paragraph 8.25, which the United States considers reflects more accurately the nature of the Operational Criteria. The United States considers that the Operational Criteria implement rather than interpret Japan's legislation.

7.7 The Panel agrees that, *stricto sensu*, the Operational Criteria may not be "interpretations", even though they clarify how the authorities of Japan actually intend to implement the Detailed Rules. However, in the absence of evidence to the contrary, they are an official document issued by the Government of Japan. As a result, the Panel only deems it necessary to replace the term "interpretation" with the more general term "statement", since what ultimately matters is that the United States and the Panel can "rely" upon the Operational Criteria as an official statement by Japan of the way the Detailed Rules are applied.

7.8 The Panel further considers it appropriate to modify paragraph 8.25 so that it better corresponds to the terms used in the second sentence of paragraph 8.19.

7.9 Having regard also to paragraphs 8.76 and 8.119, the United States requests the Panel to clarify in paragraph 8.89 that, in light of its analysis, Japan's requirement of orchard designation, including its limitation of eligible orchards to those in the states of Washington and Oregon, and Japan's requirement that export orchards be free of plants infected with fire blight, are also not supported by sufficient scientific evidence.

7.10 Japan objects to this suggestion *inter alia* because there is no "measure" limiting production sites to those located in the states of Oregon and Washington. The restriction is related to the fact that the United States has not provided documentation regarding quarantine pests and diseases other than

fire blight in other states. Japan refers to the findings of the Original Panel in this respect, claiming that the situation has not changed.¹⁴⁶

7.11 The comments of the United States in relation to paragraph 8.89 actually raise two issues. The first one relates to the question whether a finding is necessary regarding the fact that currently only orchards in the states of Oregon and Washington are eligible for designation as fire blight-free for purposes of exports to Japan. It is correct that our findings in the interim report did not expressly address that question. This is because we did not deem it necessary for two reasons.

- (a) First, we recall that Japan stated that the exclusion of states other than Washington and Oregon was because the United States has not provided documentation regarding quarantine pests and diseases other than fire blight in relation to other states. We agree with Japan that if apples from states other than Oregon and Washington cannot be exported because the United States failed to comply with phytosanitary requirements relating to diseases other than fire blight, the fact that those apples may be free of fire blight will not make them exportable to Japan. Neither before this Panel nor before the Original Panel, did the United States demonstrate that Japan imposes measures relating to fire blight in relation to other quarantine pests or diseases. Since the restriction primarily relates to other pests or diseases, we see no reason to make a finding on it. However, for the sake of transparency, we clarify this aspect in a footnote to paragraph 8.89.
- (b) Second, even if we were to assume that the restriction relates to fire blight, our finding in paragraph 8.89 is that the requirement that each orchard be designated as fire blight-free is not supported by sufficient scientific evidence within the meaning of Article 2.2 of the SPS Agreement. Our understanding of the relevant facts is that the exclusion of states other than Oregon and Washington is not a specific requirement but a factual consequence of the designation process. Indeed, Japan has repeatedly stated that it could designate orchards in other states provided the necessary information is given by the US authorities.

7.12 Finally, even if the exclusion of other states constituted a measure, since designation as such is not scientifically justified, exclusions resulting from the existence of a designation process are also not justified. No finding would be required in that case either.

7.13 The second issue raised by the United States in relation to paragraph 8.89 is that the US comments reveal that our conclusions were probably not spelled out clearly enough. This is why we modified the last sentence of paragraph 8.89.

C. ORIGINAL COMMENTS BY JAPAN AND COMMENTS OF THE UNITED STATES ON THE ORIGINAL COMMENTS BY JAPAN

7.14 Japan has requested that we delete paragraph 8.90, raising an argument regarding other plant diseases, including citrus cankers.

7.15 Paragraph 8.90 was designed to clarify that orchard inspection may be justified in other circumstances than those relating to fire blight. Since it does not refer to any specific disease, we see no reason to delete that paragraph.

¹⁴⁶ Panel Report on *Japan – Apples*, para. 7.25.

7.16 Japan also suggests that we delete our reference to human health in paragraph 8.96 because this case is not about human health. We agree that fire blight does not threaten human health. However, we simply referred to a statement by one of the experts.

7.17 Japan has also requested that we modify paragraph 8.187. Japan considers that the measure at issue is not the main reason why US apple growers have ceased to export apples since 2002. Japan argues that the insignificant demand for US apples results from the appearance, taste and quality of the exported apples.

7.18 The United States argues that this is a totally new argument on which it was not given an opportunity to comment and which, in any event, is not factually supported.

7.19 We note that, on the one hand, it is generally admitted that consumer demand in the context of a market access restriction cannot be a reliable factor to assess actual demand, to the extent that it is influenced by the availability (or lack thereof) of the restricted product on the market.¹⁴⁷ On the other hand, the United States has argued that the main reason why exports did not take place were the costs and commercial risks attached to the compliance with Japan's measure at issue.¹⁴⁸ Japan has argued that the potential benefits for US exporters of participating in the export programme under Japan's current import regime outweigh the expected costs and risks,¹⁴⁹ thus implicitly acknowledging that the exported apples will find clients to buy them at a remunerative price. This argument does not support Japan's position at the interim review stage that Japanese consumers are not attracted to US apples. Furthermore, the fact that the costs of inspection are ultimately borne by the US exporters rather than by the US Government confirms the argument of the United States that the measure at issue is burdensome and costly for US exporters. We see no reason to modify our findings in this respect.

7.20 Finally, Japan makes comments of a much less specific nature in relation to our findings under Article 2.2.

7.21 We recall that, pursuant to Article 15.2 of the DSU, a party may request the Panel "to review precise aspects of the interim report". We recall that a previous panel confronted with interim review comments questioning large sections of the interim report refused to address comments which did not relate to precise aspects of the interim report.¹⁵⁰ We note that Japan's comments regarding our finding under Article 2.2 of the SPS Agreement do not identify specific paragraphs that should be modified.

7.22 On the contrary, Japan argues first that the Panel's findings can only be valid if exported apples are indeed mature and symptomless. In this regard, Japan requests the Panel to examine whether the United States may actually export only mature, symptomless apples pursuant to its own legislation. We note that the question whether the United States exports mature, symptomless apples pursuant to its own legislation is discussed in our findings under Article 5.6 of the SPS Agreement. Japan does not request us to review precise aspects of the section of our interim report relating to Article 5.6 of the SPS Agreement. In particular, we note that neither during the proceeding, nor at the interim review stage, did Japan provide evidence that the United States ever exported to Japan apples that were contaminated with *E. amylovora*. Nor did Japan submit convincing evidence that the US quality control process contains flaws susceptible to lead to the exportation of apples contaminated with *E. amylovora* in the future. We also note that the Original Panel already discussed the possibility of human errors.¹⁵¹

¹⁴⁷ See also GATT Panel Report on *Japan – Leather II (US)*, paras. 51-55.

¹⁴⁸ United States reply to additional questions of the Panel, 25 January 2005.

¹⁴⁹ Japan comments on the United States' answer to additional questions of the Panel, 1 February 2005.

¹⁵⁰ Panel Report on *Australia – Salmon*, para. 7.3.

¹⁵¹ See, e.g., Panel Report on *Japan – Apples*, paras. 8.158-8.161.

7.23 Second, Japan seems to suggest that we address at this stage the process of verification that exported apples are mature and symptomless. We largely agree with the United States that Japan's suggestion amounts to re-arguing the validity of the measure at issue as a whole from a different angle, by presenting the elements of the measure at issue as a "production process control" necessary to *verify* that the exported product is mature, symptomless apples. We believe that the interim review is not the appropriate stage for rearguing the case on new grounds.

7.24 For these reasons, we are of the view that we should not address Japan's comments which do not relate to specific paragraphs of our findings, since Japan failed to comply with the requirements of Article 15.2 of the DSU in this respect.

7.25 Even if we were to consider those arguments, and even if we were to agree with Japan that we should look at the measure from the angle it suggests, this would not affect our findings that most elements of the measure at issue are maintained without sufficient scientific evidence, within the meaning of Article 2.2 of the SPS Agreement.

7.26 We note that Japan relies on a statement made by Dr Smith in the course of our hearing of the experts.¹⁵² However, what Dr Smith said in the paragraph quoted by Japan was limited to a requirement that orchards be blight-free. He did not address other aspects of the measure at issue. In addition, we did not quote Dr Smith's statement in the context of our analysis under Article 2.2 because, in this statement, Dr Smith explicitly avoids claims that his opinion is based on scientific evidence. Rather, he acknowledges that "I don't know whether I have produced a scientific argument or if that is a technical argument."

7.27 Dr Smith's statement referred to by Japan does not affect our conclusion in paragraph 8.89 that available scientific evidence does not support the view that mature, symptomless apples harvested from blighted orchards, whether severely blighted or not, would harbour populations of *E. amylovora* capable of spreading fire blight disease.

7.28 At best, Dr Smith's suggestion could represent an alternative to Japan's current measure within the meaning of Article 5.6 of the SPS Agreement. We recall, however, that Japan does not refer to Dr Smith in relation to our findings under Article 5.6, but in relation to our findings under Article 2.2 of the SPS Agreement. Moreover, Japan never argued this point during the proceeding in relation to Article 5.6 and it is not for us to make a case for Japan. We recall in this respect that the United States proposed an alternative measure to the measure at issue, which we considered.

7.29 We note that the experts consulted by the Panel acknowledged that verification through samples may not give full certainty that only mature, symptomless apples will be exported. We nonetheless recall that there was not sufficient scientific evidence that apple fruit can complete the pathway for fire blight.

7.30 As a result, even if we were to admit Japan's comments regarding our findings under Article 2.2 of the SPS Agreement, we would see no reason to modify those findings.

7.31 We also took into account the relevant editorial suggestions made by Japan.

¹⁵² Dr Smith, Transcript, para. 135.

VIII. FINDINGS

A. INTRODUCTORY REMARKS

8.1 The United States claims that Japan has failed to implement the Dispute Settlement Body's (DSB) recommendations and rulings by failing to bring its phytosanitary measures on imported US apples, which restrict the import of such apples in connection with fire blight and the fire blight disease-causing organism, *Erwinia amylovora*, into compliance with its obligations under the Agreement on Sanitary and Phytosanitary Measures (SPS Agreement).¹⁵³

8.2 The United States claims in substance that Japan's phytosanitary measures at issue are not compatible with Articles 2.2, 5.1 and 5.6 of the SPS Agreement, as well as with Articles 4.2 of the Agreement on Agriculture and Article XI of GATT 1994.

8.3 As a preliminary remark, we recall that Articles 2.2, 5.1 and 5.6 of the SPS Agreement are interrelated and that our findings under one of these provisions would be of relevance to our findings on the others.

8.4 We would also like to stress that the role of a panel under Article 21.5 of the DSU is, like that of the Original Panel, limited to finding whether the party concerned failed to comply with its WTO obligations. A panel may legitimately restrict its findings to what is strictly necessary to determine whether the measure at issue is in breach of the Member's WTO obligations.¹⁵⁴ It is for the party found in breach of its obligations to make all the appropriate changes to bring its legislation fully into conformity with its obligations. However, we are mindful of the specific nature of Article 21.5 proceedings, which come after the party found in breach of its obligations in the original proceeding has been given a reasonable period of time to bring its legislation into conformity and should have normally taken measures to comply with the DSB recommendations and rulings.

8.5 Specific circumstances of non-compliance may dictate that an Article 21.5 panel should make more exhaustive findings than the Original Panel so as to assist the party concerned. We recall in this respect the comment of the Appellate Body in *Australia – Salmon*:

"[The aim of the dispute settlement system] is to resolve the matter at issue and 'to secure a positive solution to a dispute'. To provide only a partial resolution of the matter at issue would be false judicial economy. A panel has to address those claims on which a finding is necessary in order to enable the DSB to make sufficiently precise recommendations and rulings so as to allow for prompt compliance by a Member with those recommendations and rulings 'in order to ensure effective resolution of disputes to the benefit of all Members.'"¹⁵⁵

8.6 We do not believe that the Original Panel only provided a "partial resolution of the matter". We recall, however, that the United States requests that we treat the phytosanitary requirements at issue as several measures and make findings on the legality of each of them. Japan, while holding to the view that each requirement is part of a "system", also requests us to make specific findings on each element of its revised measure. Under these circumstances, we agree with the parties and decide, as we are entitled to, not to exercise judicial economy¹⁵⁶ whenever we believe that making a specific finding would facilitate prompt and full compliance by Japan at this stage.

¹⁵³ WT/DS245/11.

¹⁵⁴ See Appellate Body Report on *US – Wool Shirts and Blouses*, pp. 339-340.

¹⁵⁵ Appellate Body Report on *Australia – Salmon*, para. 223 (footnotes omitted).

¹⁵⁶ See Appellate Body Report on *US – Lead and Bismuth II*, paras. 71 and 73.

8.7 In addition, the United States argues that the "Operational Criteria", i.e. administrative instructions which Japan claims to apply as part of the actions it took to comply, are not within the terms of reference of the Panel. The United States made a request for a preliminary ruling of the Panel on this issue. We address this matter as part of our discussion of the scope of the measure taken to comply.

8.8 Other issues of a procedural nature are addressed where necessary, as part of the discussion on substantive provisions.

B. THE "MEASURE(S) TAKEN TO COMPLY"

1. Japan's legislation

(a) The legislation

8.9 The phytosanitary requirements subject to this recourse by the United States to Article 21.5 of the DSU are based on the following legislation:

- (a) Plant Protection Law No. 151 enacted on 4 May 1950 (and specifically Article 7 thereof);
- (b) Plant Protection Law Enforcement Regulations enacted on 30 June 1950 (and specifically Article 9 and Annexed table 2 thereof);
- (c) Ministry of Agriculture, Forestry and Fisheries (MAFF) Notification No. 354 dated 10 March 1997; and
- (d) MAFF Administrative Directive, "Detailed Rules for Plant Quarantine Enforcement Regulation Concerning Fresh Fruit of Apple Produced in the United States of America " dated 30 June 2004 ("Detailed Rules"), amending the MAFF "Detailed Rules for Plant Quarantine Enforcement Regulation Concerning Fresh Fruit of Apple Produced in the United States of America" dated 29 January 2002.
- (e) In addition, Japan claims to implement the Detailed Rules through administrative instructions called "Operational Criteria". As mentioned above, the United States claims that the Operational Criteria are not part of our mandate. We address this claim hereafter.

(b) Treatment of the "Operational Criteria" by the Panel

(i) *Introduction*

8.10 On 27 September 2004, the United States requested that the Panel issue a preliminary ruling to the effect that Japan's Operational Criteria were not a measure taken to comply within the meaning of Article 21.5 of the DSU and were therefore not within the terms of reference of this proceeding. In addition, the United States requested that the Panel not consider the Operational Criteria in determining whether Japan's measures taken to comply with the DSB's recommendations and rulings were consistent with Japan's WTO obligations.

8.11 On 7 October 2004, we invited Japan to comment on the US request in its written rebuttals, which Japan did. On 22 October, we informed the parties of the following:

"Having considered the views expressed by both parties, and without prejudice to those views, the Panel concludes that it would be more appropriate to address the issues raised by the United States in the context of its overall review of Japan's compliance or otherwise with the covered agreements referred to in the Panel's terms of reference. As a result, parties should feel free to further express views on the Operational Criteria in the course of the coming substantive hearing, if they so wish."

8.12 Parties subsequently argued the matter during the substantive meeting with the Panel.

(ii) *Summary of the arguments of the parties*¹⁵⁷

8.13 According to the United States, the DSU does not give authority to a panel to make "advisory rulings" on a proposed or potential future measure. The Operational Criteria had not been "taken to comply with the recommendations and rulings of the DSB" by the time of the establishment of the Panel and so could not be within the Panel's terms of reference. Japan had not notified them to the WTO, nor had Japan referred to them in its 29 July request for arbitration under Article 22.6 of the DSU or its 30 July statement to the DSB. Although Japan indicated that it had intended to discuss and agree on the Operational Criteria with the United States, the United States had first learned of the Operational Criteria when it received Japan's first submission.

8.14 Japan argues that the Operational Criteria have all the characteristics of a "measure" under the SPS Agreement. These Criteria are a "supplementary guideline" setting forth methods to implement the Detailed Rules although they do not take the form of an enforceable regulation. They are administrative criteria of the Japanese Government. The Operational Criteria are a specific irrevocable offer which Japan would be obliged to implement if the United States agreed to them.

8.15 Japan argues that if the Panel did not consider the Operational Criteria it would be forced to either accept, or reject, the Detailed Rules without information relevant to their interpretation. The Detailed Rules were formulated according to Japanese administrative law practice. Japanese laws and regulations stipulate a general regulative mechanism, and government authorities stipulate rules, guidelines and directives within their mandate. Although the precise wording, documentation and dissemination of the Operational Criteria were completed as late as 13 September 2004, the Operational Criteria should be considered as the embodiment and elaboration of the Detailed Rules, which were notified to WTO Members on 29 June 2004.

(iii) *Analysis of the Panel*

8.16 We note that the Operational Criteria provide for a number of procedures which are not otherwise specified in other parts of Japan's legislation:

- (a) The objectives of the border zones of around 10-meter width are two-fold. The first objective is to prevent branches of trees inside the "free area of fire blight" (as provided for by the Detailed Rules, hereinafter "orchard") from overlapping, or being in direct contact, with plants outside the orchard. The second objective is to delineate the boundary of the export orchard for which both authorities will ensure the absence of fire blight symptoms according to these criteria. The requirement will be automatically met when the orchard is surrounded by passageways, waterways or other equivalent zones of an around 10-meter width, as is normally the case. Consequently, if there are zones of the equivalent width inside one orchard at a

¹⁵⁷ A more detailed account of the arguments of the parties can be found in paras. 4.1-4.9 of this Report.

certain location, each of the sections (blocks) surrounded by the zones will be considered an independent orchard.

- (b) No inspection of the border zone will be done as long as the border zone is not used as cultivating grounds of host plants of the disease. This requirement will also be met automatically when the orchard is surrounded by passageways or waterways.
- (c) The annual inspection by the US authorities (including confirmation by the US and Japanese authorities) will be done only *once*, visually, by officials driving through an orchard using a buggy car, inspecting the exterior of apple trees inside the orchard.
- (d) Inspection under (c) above is designed to detect only typical symptoms on large branch(es). Suspected symptoms will then be laboratory-tested before they are found positive.
- (e) When a heavily blighted tree is found, only the particular section (block) within the orchard will be disqualified, as long as the around 10-meter "border zone" (e.g., a passageway or a waterway) surrounds the section. The rest of the orchard will retain the status of a qualified export orchard and will be treated equally with other export orchards where no such tree was found.
- (f) As long as a particular growing lot is surrounded by a "border zone" of around 10 meters within an orchard, each such lot of any size will be considered an "independent orchard" or a "section" for the purpose of determination under (e) above, except for those varieties designated as "least resistant" to the fire blight disease by the USDA. Sections for these varieties must be surrounded by either a passageway, a waterway, a cliff or other natural barriers of around 10 meters in width.

8.17 As a preliminary remark, the Panel notes that the US request for a preliminary ruling was made after its first written submission, whereas paragraph 13 of the Panel working procedures provides that any such request should be filed at the time of the first written submission.¹⁵⁸ However, the United States claims that it became aware of the existence of the Operational Criteria only when Japan filed its first written submission.¹⁵⁹ Japan alleges that the United States was aware of the substance of the Operational Criteria before that date.¹⁶⁰ However, we see no reason not to believe that the United States was made aware of the decision of Japan to apply the above-mentioned requirements through "Operational Criteria" only when Japan filed its written submission before the Panel. Therefore, we consider the explanation given by the United States to be a showing of good cause, within the meaning of paragraph 13 of our working procedures. As a result, we did not, and do not now, find that the US request is inadmissible on ground of lateness.

8.18 The Panel recalls that a review under Article 21.5 of the DSU applies to "measures taken to comply with the recommendations and rulings" of the DSB. It notes the argument of the United States that the Operational Criteria are not "measures" and were apparently not even adopted at the time the matter was referred to the Panel.

8.19 The Panel is not of the view that the binding or non-binding nature of the Operational Criteria should play a role in determining whether they should be reviewed in this proceeding. As soon as the Operational Criteria were brought to the attention of the United States and the Panel, they became an

¹⁵⁸ See working procedures of the Panel, Annex I to this Report.

¹⁵⁹ See para. 4.7, above.

¹⁶⁰ See para. 4.2, above.

official statement of how Japan intended to implement its legislation on fire blight on which the United States and the Panel could rely.¹⁶¹ As such, the Operational Criteria are a fact.¹⁶² The duty of the Panel to make an objective assessment of the facts pursuant to Article 11 of the DSU implies that the Operational Criteria, as a fact, be taken into account by the Panel if they are properly before it.

8.20 The second and more important issue before us is whether a text dated 13 September 2004, i.e. more than one month after the establishment of the Panel and more than two months after the end of the reasonable period of time (30 June 2004), may be reviewed by the Panel.

8.21 Panels have dealt with events that occurred in the course of the proceedings and that had affected the existence or persistence of a violation.¹⁶³ Previous Article 21.5 panels have been confronted with measures adopted after the end of the reasonable period of time but before their establishment, or measures adopted soon after the establishment of the panel. In *Australia – Salmon (Article 21.5 – Canada)*, the complaining party requested that a measure not identified in the request for establishment be nonetheless reviewed by the compliance panel. In its report, the panel said:

"We do not consider that measures taken subsequently to the establishment of an Article 21.5 compliance panel should *per force* be excluded from its mandate. [...] In compliance panels we are of the view that there may be different and, arguably, even more compelling reasons [than before an original panel] to examine measures introduced during the proceedings. As noted earlier, compliance is often an ongoing or continuous process and once it has been identified as such in the panel request, as it was in this case, any 'measure taken to comply' can be presumed to fall within the panel's mandate, unless a genuine lack of notice can be pointed to."¹⁶⁴

8.22 We consider that the approach of the *Australia – Salmon (Article 21.5 – Canada)* panel could equally apply in this case.

8.23 We also note that in *Japan – Agricultural Products II*, the Panel found that Japan should have notified a non-binding administrative practice pursuant to Article 7 and Annex B of the SPS Agreement. We believe that if the guidelines referred to in *Japan – Agricultural Products II* were deemed to constitute "phytosanitary regulations" within the meaning of Annex B, paragraph 1, of the SPS Agreement, the Operational Criteria should *a fortiori* be considered to be "phytosanitary regulations" which have to be "published promptly in such a manner as to enable interested Members to become acquainted with them."

8.24 Japan did not provide any reason why the Operational Criteria could not be notified to the United States by the end of the reasonable period of time if they indeed, as Japan implies, had already been prepared, although apparently in a different form. We deduce from the obligation of Members to promptly publish their phytosanitary regulations pursuant to Article 7 and Annex B of the SPS Agreement that the United States was under no obligation to assume that Japan would adopt additional implementing instruments, nor that these instruments would take the form of Operational Criteria. Rather, it was for Japan to take appropriate steps to inform the United States.

8.25 However, totally disregarding the Operational Criteria in this case would go against the principle of prompt settlement of disputes contained in Article 3.3 of the DSU. The Operational Criteria obviously provide a statement of how Japan intends to implement the recommendations and

¹⁶¹ See Panel Report on *US – Section 301 Trade Act*, para. 7.124.

¹⁶² See Appellate Body Report on *India – Patents (US)*, para. 65, quoting the judgement of the Permanent Court of International Justice in *Certain German Interests in Polish Upper Silesia*.

¹⁶³ Panel Report on *India – Autos*, paras. 8.27- 8.28.

¹⁶⁴ Panel Report on *Australia – Salmon (Article 21.5 – Canada)*, para. 7.10.

rulings of the DSB at the time this Panel was called upon to review the "measures taken to comply" by Japan.

8.26 As a result, *the Panel will consider the Operational Criteria to the extent that they inform an objective assessment of the matter.*

8.27 However, the Panel regrets Japan's practice in this case. The communication of the Operational Criteria to the United States before the establishment of the Panel might well have assisted the United States in determining whether a recourse to Article 21.5 of the DSU would be fruitful. In particular, it would have allowed the United States to better assess the extent of Japan's compliance with the recommendations and rulings of the DSB and facilitated a prompt settlement of the dispute.

2. Scope of Japan's "measure(s) taken to comply"

(a) Whether the measure taken to comply should be treated as one measure composed of several requirements or as separate measures

8.28 We note that, on the one hand, the United States has requested that we treat each requirement imposed by Japan as a separate measure. On the other hand, Japan also requests us to make specific findings on each of the requirements that it maintains.

8.29 We recall that the Original Panel treated the requirements imposed by Japan as several elements of one single measure, essentially because all the requirements were presented as part of a systemic approach. The parties gave us no substantive reasons for us to treat the compliance measure any differently than the original measure. The approach of the Original Panel was not reversed by the Appellate Body and the same "systemic" approach as the one followed by Japan with respect to the original measure seems to have prevailed with the compliance measure. However, as highlighted above, the circumstances of this case may justify that we make specific findings on each of the elements of the compliance measure, without having to treat each element as a separate measure. As we will see below, many elements of the compliance measure are interrelated and justified on the basis of the same scientific evidence. Treating them as separate measures could give the impression that they can apply independently of each other, which may not always be the case.

8.30 As a result, the Panel decides to treat all the requirements imposed by Japan as elements of one measure. However, we may make specific findings on the different elements of this measure if we believe this will assist in the prompt resolution of the dispute.

(b) Identification of the measure taken to comply

8.31 We recall that, in *Canada – Aircraft (Article 21.5 – Brazil)*, the Appellate Body specified that Article 21.5 proceedings are limited to those measures taken to comply with the recommendations and rulings of the DSB. In the opinion of the Appellate Body:

"[...] the phrase 'measure taken to comply' refers to measures which have been, or which should be, adopted by a Member to bring about compliance with the recommendations and rulings of the DSB. In principle, a measure which has been 'taken to comply with the recommendations and rulings' of the DSB will *not* be the same measure as the measure which was subject to the original dispute, so that, in principle, there would be two separate and distinct measures [footnote omitted]: the original measure which *gave rise* to the recommendations and rulings of the DSB,

and the 'measures taken to comply' which are – or should be – adopted to *implement* those recommendations and rulings."¹⁶⁵

8.32 In its implementation process, Japan has made some changes to the original measure¹⁶⁶ and has produced new studies to support its view that (a) mature, symptomless apples can be "latently" infected and (b) infected apples could, once on the Japanese territory, contaminate host plants. On the basis of these studies, Japan has maintained many elements of the original measure in the measure taken to comply. For this reason, we consider that all the elements of the measure currently in place should be treated as the "measures taken to comply", even though many of those elements were already found in the original measure.

8.33 As a result, we conclude that the "measure taken to comply" which this Panel should review is composed of the following elements:

- (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. Currently, the designation is accepted only for orchards in the states of Washington and Oregon;
- (b) The export orchard must be free of plants with fire blight symptoms;
- (c) The fire blight-free orchard must be surrounded by a buffer zone (or border zone) of around ten meters, free of fire blight symptoms;
- (d) The orchard and surrounding buffer zone must be inspected once per year at early fruitlet stage. Detection of a blighted tree in this area by inspection will disqualify the orchard;
- (e) Harvested apples must be treated with surface disinfection by soaking in sodium hypochlorite solution;
- (f) The interior of the packing facility must be disinfected 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 packing facilities.

C. ARTICLE 2.2 OF THE SPS AGREEMENT

1. Approach of the Panel¹⁶⁷

8.34 Article 2.2 of the SPS Agreement reads as follows:

"Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on

¹⁶⁵ Appellate Body Report on *Canada – Aircraft (Article 21.5 – Brazil)*, para. 36.

¹⁶⁶ See paras. 4.14-4.20, above.

¹⁶⁷ A detailed account of the arguments of the parties can be found in paras. 4.21-4.130 of this Report.

scientific principles and is not maintained without sufficient scientific evidence, except as provided for in paragraph 7 of Article 5."

8.35 The United States claims that Japan has failed to comply with the recommendations and rulings of the Dispute Settlement Body and that Japan's compliance measure is not compatible with Article 2.2 of the SPS Agreement. In this regard, the United States only claims that the compliance measure is maintained without sufficient scientific evidence, within the meaning of Article 2.2.

8.36 Japan considers in substance that the new studies referred to in its submissions provide sufficient scientific evidence to justify all the elements of the compliance measure.

8.37 We recall that, in its report, the Original Panel proceeded in two steps. First, it assessed to what extent scientific evidence confirmed that apple fruit could be contaminated and, if exported to Japan, complete the pathway and contaminate host plants in Japan; secondly, it went on to assess to what extent the measure as a whole was maintained with sufficient scientific evidence, i.e. whether it bore any rational relationship with the scientific evidence. The Appellate Body did not contest the validity of this approach. We therefore consider that we can follow the same approach as the Original Panel, i.e.:

- (a) first, determine whether the scientific evidence in its present state confirms the possibility for apple fruits to serve as a pathway for the entry, establishment and spread of fire blight in Japan; and
- (b) second, determine whether the elements of the measure at issue are "not maintained without scientific evidence", i.e. whether a sufficient or adequate relationship exists between the scientific evidence and the elements of the compliance measure.

8.38 As an Article 21.5 compliance panel, we are required to look at the compliance measure as a new measure subject to new claims.¹⁶⁸ We note that the United States considers that the new studies submitted by Japan do not affect the body of scientific evidence relied upon by the Original Panel. Nor does Japan claim that the scientific evidence relied upon by the Original Panel is no longer valid. Rather, it claims that its new studies complement the existing scientific evidence. We therefore consider that the scientific evidence available to the Original Panel is still relevant to our examination of the compliance measure and we take as our starting point the conclusions reached by the Original Panel with respect to that scientific evidence.

2. Existence of sufficient scientific evidence that apples can serve as a pathway for the entry, establishment and spread of fire blight in Japan

(a) Introduction

8.39 The Original Panel concluded the following with respect to the scientific evidence regarding entry, establishment and spread of fire blight in Japan through apple fruit:

- "(a) If infection or infestation of immature apple fruit is not contested, infection of mature, symptomless apples has not been established;
- (b) the possible presence of endophytic bacteria in mature, symptomless apples is not generally established;

¹⁶⁸ See, e.g., Appellate Body Report on *Canada – Aircraft (Article 21.5 – Brazil)*, paras. 40-42.

(c) the presence of epiphytic bacteria in mature, symptomless apples is considered to be extremely rare;

(d) assuming that either of the situations of infection or infestation listed above would arise, the entry, establishment or spread of the disease as a result of the presence of these bacteria in or on apple fruit would require the completion of an additional sequence of events which is deemed unlikely, and which has not even been experimentally established to date."¹⁶⁹

8.40 The Original Panel concluded that there was not sufficient scientific evidence that apple fruit are likely to serve as a pathway for the entry, establishment or spread of fire blight within Japan. The Panel nonetheless made a number of qualifications to this conclusion. It considered that the scientific evidence "does suggest that some slight risk of contamination cannot be excluded." It nonetheless stated that the experts all categorized this risk as 'negligible'¹⁷⁰ but could not agree with the United States that the scientific prudence displayed by the experts should be completely assimilated to a "theoretical risk".¹⁷¹

8.41 Japan claims that it has new scientific evidence of (i) possible infestation/infection of apple fruits through the pedicel which could lead to latent infection of otherwise mature and symptomless apples; and (ii) possible completion of the pathway through transmission of bacteria by flies from infected discarded apples to host plants in Japan.

8.42 The new studies relied upon by Japan are:

- (a) Azegami, *et al.* (2005)¹⁷² which purports to show that maturing or mature apple fruit are not immune from infection by the bacteria.
- (b) Tsukamoto *et al.* (2005a)¹⁷³ which purports to demonstrate that mature apples can be infected through cut pedicels and that the bacteria can survive for several months in the apple at low temperatures.
- (c) Tsukamoto *et al.* (2005b),¹⁷⁴ which purports to show completion of a pathway from infected (whether latently or not) apple fruit by common flies as a vector in an environment consistent with the Japanese fauna.

¹⁶⁹ Panel Report on *Japan – Apples*, para. 8.171.

¹⁷⁰ Panel Report on *Japan – Apples*, para. 8.173.

¹⁷¹ Panel Report on *Japan – Apples*, para. 8.175.

¹⁷² Azegami *et al.*, "Invasion and colonization of mature apple fruit by *Erwinia amylovora* tagged with bioluminescent genes", *Journal of General Plant Pathology* 70(6) December 2004. In response to the US submission regarding a US study on the possibility that transpiration could explain bacterial movement into fruit (Exhibit USA-21), Japan also presented information on an additional study by Azegami (Azegami *et al.*, "Entry of *Erwinia amylovora* into apple fruit from fruit-bearing twig through abscission layer at the time of fruit maturation", Exhibit JPN-16) regarding the potential movement of bacteria through the abscission layer after it had been formed. This Azegami study was not referenced in Japan's 2004 risk assessment and had not been published at the time of the Panel proceeding. In addition, neither party directly discussed the information included in that study or otherwise indicated that it was essential to their arguments before the Panel.

¹⁷³ Tsukamoto *et al.*, "Infection frequency of mature apple fruit with *Erwinia amylovora* deposited on pedicel and its survival in the fruit stored at low temperature", *Journal of General Plant Pathology* (submitted).

¹⁷⁴ Tsukamoto *et al.*, "Transmission of *Erwinia amylovora* from blighted mature apple fruit to host plants via flies", *Research Bulletin Plant Protection Service Japan* (accepted for publication).

- (d) Kimura *et al.* (2005)¹⁷⁵ which discusses the probability of the infection of mature apples and completion of the pathway in a discussion of the risk of introduction and establishment of the disease in Japan.

8.43 The submission of these new studies by Japan in support of its compliance measure requires that we re-assess the scientific evidence so as to determine:

- (a) whether sufficient scientific evidence supports the assertion that mature and symptomless apples can nonetheless harbour endophytic bacteria; and
- (b) whether sufficient scientific evidence supports the assertion that the pathway could be completed between a discarded infested/infected apple and a host plant in Japan, so as to lead to the establishment and spread of fire blight in Japan.

8.44 These are the two questions that we will successively address in this section.

8.45 Before proceeding with our review of those questions, we believe that we need to make the following clarification with respect to the notion of *sufficient* scientific evidence. This Panel is confronted with the situation where Japan claims that certain new pieces of scientific evidence specifically support its measure. Thus the question before us in this proceeding is not so much whether the evidence relied upon by Japan is "scientific"¹⁷⁶, but primarily whether it is "sufficient". In *Japan – Agricultural Products II*, the Appellate Body presented "sufficiency" as a relational concept between two elements: the scientific evidence and the measure at issue. The Original Panel stressed that the scientific evidence relates to a risk and is supposed to confirm the existence of a given risk.¹⁷⁷ We note that the measure is supposed to address that risk. In other words, in order for scientific evidence to support a measure sufficiently, it seems logical to us that such scientific evidence must also be sufficient to demonstrate the existence of the risk which the measure is supposed to address. As a result, it seems reasonable to consider the extent of the relationship between the scientific evidence and the risk which this evidence is claimed to establish.

8.46 We also note that Japan claims that the studies it commissioned do not contradict the evidence already available. Even if that were not the case, the fact that the studies relied upon by Japan may not correspond to the prevailing view representing the "mainstream" of international scientific opinion is not as such a reason for us to deny any relevance to these studies.¹⁷⁸ Each of the studies relied upon by Japan should be assessed on its own merits.

- (b) Does the scientific evidence, and in particular Japan's new studies, support the assertion that mature and symptomless apples can nonetheless harbour endophytic bacteria?

- (i) *Azegami et al.* (2005)¹⁷⁹

8.47 Japan essentially claims that *Azegami et al.* (2005) shows that bacteria passes through vascular tissues and that this potential infection route would remain active until the formation of the abscission layer.

¹⁷⁵ Kimura *et al.*, "The probability of long-distance dissemination of bacterial disease via fruit", Journal of General Plant Pathology (submitted).

¹⁷⁶ We asked the experts whether the new studies presented by Japan met the criteria usually applicable in the field to be relevant scientific evidence. The replies of the experts are contained in paras. 6.8-6.18.

¹⁷⁷ Panel Report on *Japan – Apples*, para. 8.104.

¹⁷⁸ See Appellate Body on *EC – Hormones*, paras. 193-194.

¹⁷⁹ For a description of the study, see paras. 4.38-4.44 above.

8.48 The United States argues that Azegami *et al.* (2005) successfully introduced fire blight bacteria into apple fruit through the pedicel, only when the pedicel and its abscission layer were severed. The spread of bioluminescence into apple fruit was as likely a consequence of the cut-pedicel method and transpiration as a result of active colonization and invasion by bacteria.

8.49 Having considered the arguments of the parties and third parties on these two studies, we have reached the conclusion that, for the purposes of the Panel's assessment, the main issue concerning these studies was their relation to natural conditions in an orchard. We therefore sought the views of the scientific experts on this issue.

8.50 The experts consulted by the Panel generally consider that the conclusion of latent infection in Azegami, *et al.* (2005) did not provide any results on latent infection under natural conditions.¹⁸⁰ Dr Geider stated that, in late summer, the risk and occurrence of new fire blight incidence decline. Migration of *E. amylovora* from an infested branch into a disease-free branch and then into apple fruits seemed unrealistic from the known infection steps.¹⁸¹ Dr Hale noted that the results of Azegami *et al.* (2005) did not provide convincing evidence that mature fruit were likely to become infected under natural conditions in an orchard.¹⁸² Dr Smith stated that:

"The suggested scenario of Japan was that bacteria might enter mature fruits, from infections on twigs, through the pedicels, and be carried by the vascular system of the fruit to the cortex, where they might persist as a latent infection. There was no direct evidence that this happened under natural conditions. It seemed implausible that earlier studies on the isolation of bacteria from inside fruits, which included cortex, somehow had failed to detect these infections."¹⁸³

8.51 Dr Hayward was not persuaded by the Azegami *et al.* (2005) study.¹⁸⁴

8.52 In light of the opinion of the experts, we conclude that the Azegami, *et al.* (2005) study does not support the conclusion that apples would become mature and symptomless and yet be latently infected in the natural conditions of an orchard.

(ii) Tsukamoto *et al.* (2005a)¹⁸⁵

8.53 In essence, Japan claims that the Tsukamoto *et al.* (2005a) study shows that *E. amylovora* has the ability to survive for a period of a few months under cold conditions, which corresponds to the period and temperature conditions applicable to US apple fruits during handling, cold storage and shipment to Japan.

8.54 The United States replies that the artificially inoculated fruit were maintained in conditions which favoured the development of the bacteria and were completely different from those applicable to apples exported to Japan. The phenomenon of infection through the pedicel described in Azegami *et al.* (2005) and Tsukamoto *et al.* (2005a) is an artefact of laboratory experimentation.

8.55 Having considered the arguments of the parties and third parties on this study, we considered that, for the purposes of the Panel's assessment, the main issue arising from it related to the storage conditions applied to the apple fruit after their inoculation, in particular the fact that they seemed to differ substantially from the usual commercial storage conditions applied in the United States. We

¹⁸⁰ Dr Smith, para. 6.32; Dr Hale, para. 6.27; Dr Hayward; para. 6.43.

¹⁸¹ Dr Geider, para. 6.25; Dr Hale, para. 6.30; Dr Hayward, para. 6.31.

¹⁸² Dr Hale, paras. 6.56-6.58.

¹⁸³ Dr Smith, para. 6.60.

¹⁸⁴ Dr Hayward, para. 6.59.

¹⁸⁵ For a description of the study, see paras. 4.44-4.47 above.

therefore consulted the experts on the storage conditions applied to inoculated apples in Tsukamoto *et al.* (2005a).

8.56 Dr Hale recalled that there is no published scientific evidence to suggest that mature, symptomless fruit were infected via the pedicels under natural conditions. The incubation of inoculated fruit at 25 degrees Celsius for nine days prior to cool storage at 5 degrees Celsius was certainly not a situation that would apply under normal conditions of harvest, cool storage and export of apples. Consequently, Dr Hale considered that the Tsukamoto *et al.* (2005a) study relating to the survival of *E. amylovora* in inoculated and incubated fruit did not present any useful information.¹⁸⁶ Dr Hayward also considered that the treatment applied to apples in Tsukamoto *et al.* (2005a) was unlike that used in commercial conditions. Dr Hayward added that the inoculated apples had been incubated for nine days at 25 degrees Celsius, a temperature within the optimum range for growth in culture in the laboratory.¹⁸⁷ Dr Smith commented that Tsukamoto *et al.* (2005a) was the "weakest part" of the new studies.¹⁸⁸

8.57 We conclude from the above that the Tsukamoto *et al.* (2005a) study does not support the view of Japan that *E. amylovora* inoculated in a mature apple would survive cold storage treatment in real commercial conditions.

(c) Does the scientific evidence support the assertion that the pathway could be completed between a discarded infested/infected apple and a host plant in Japan, so as to lead to the establishment and spread of fire blight in Japan?

(i) *Tsukamoto et al. (2005b)*¹⁸⁹

8.58 Japan essentially claims that Tsukamoto *et al.* (2005b) demonstrates that the completion of the pathway is more likely than thought at the time of the Original Panel. Three elements of the Tsukamoto *et al.* (2005b) experiment methodology captured natural ecological conditions. Flies endemic to Japan were known vectors of fire blight disease. Japanese pear fruit, which were highly susceptible to *E. amylovora*, were realistically representative of Japanese host plants. Moreover, the timing of apple importation/consumption and of pear growth coincides. Finally, the level of contamination of flies in the second phase of the experiment was approximately equal to the level observed in insects found in blighted orchards in natural conditions. According to Japan, it was logical to conclude that the combination of infected apple fruit, flies and suitable host plants posed a risk of completion of a pathway of the disease into Japan.

8.59 The United States argues that the methods employed in the study were so far removed from what might actually take place under orchard production conditions that the resulting data is not useful in assessing the risk of transmission of fire blight or determining a probabilistic estimate of a real world event. In particular, according to the United States, Tsukamoto *et al.* (2005b) did not demonstrate that greenbottle flies acquired cells of *E. amylovora* from infected fruits of their own volition (i.e. when not artificially forced to associate with infected apple fruit). Tsukamoto *et al.* (2005b) does not demonstrate that the flies had directly or indirectly carried *E. amylovora* from the infected fruit to the susceptible host material. Finally, the study also does not demonstrate that infection and disease development were a result of a natural interaction between the flies and the host material and were not dependent on artificial mechanical injury.

¹⁸⁶ Dr Hale, para. 6.93.

¹⁸⁷ Dr Hayward, para. 6.94.

¹⁸⁸ Dr Smith, para. 6.97.

¹⁸⁹ For a description of the study, see paras. 4.50-4.56 above.

8.60 Having considered the arguments of the parties and third parties on these studies, the Panel sought the views of the scientific experts on three main issues:¹⁹⁰

- (a) whether the Tsukamoto *et al.* (2005b) study logically supported a risk of completion of the pathway;
- (b) whether the conditions the flies were subjected to in the Tsukamoto *et al.* (2005b) study related to "plausible ecological conditions"; and
- (c) to what extent flies could operate as possible vectors for the spread of fire blight.

8.61 Regarding the first question, Dr Geider stated that the chain of events required might not practically occur and was scientifically unlikely.¹⁹¹ Dr Hale had difficulties agreeing with Japan's argument that the logical conclusion from the results of that study, was that the combination of artificially infected apple fruit, flies, and suitable host plants poses a risk of completion of the disease pathway.¹⁹² Drs Hale and Hayward also noted that the experimental conditions imposed bore little resemblance to real world conditions. The Tsukamoto *et al.* (2005b) study eliminated all of the critical factors of the natural environment, such as desiccation, cyclical wetting/drying, UV irradiation and heat exposure, as well as biotic factors such as antagonism or predation of *E. amylovora* by other micro-organisms.¹⁹³ From the results of the study, it could not be concluded that flies contaminated with *E. amylovora* from inoculated apples did, in fact, cause infection in susceptible host tissues. This pathway had not been completed in the experiment. There was no evidence of completion of a pathway of the disease even in the artificial experimental conditions imposed in the study. Conclusions about how these conditions related to the natural environmental situation could only be conjecture.¹⁹⁴ Dr Smith considered that the lack of investigation of direct infection by flies much weakened the claim that a pathway had been demonstrated.¹⁹⁵ Drs Geider, Hale and Hayward considered that insects were unlikely to visit both infected fruit and susceptible plant tissues such as blossoms.¹⁹⁶

8.62 The Panel further inquired whether, in the opinion of the experts, the conditions the flies were subjected to related to "plausible ecological conditions", as stated by Japan.

8.63 Dr Hale confirmed that the experimental conditions the flies had been subjected to did not bear any relationship with "plausible ecological conditions".¹⁹⁷ Drs Hayward and Smith expressly concurred.¹⁹⁸ Dr Smith in particular insisted that the insects had been placed in a no-choice situation.¹⁹⁹ while Dr Geider stressed that this was a theoretical situation.²⁰⁰

8.64 On the third question, Dr Geider stated that it seemed reasonable to distinguish the visiting behaviour of fly species (garbage/flowers).²⁰¹ Dr Hale considered that the Tsukamoto *et al.* (2005b) study did not provide convincing scientific evidence that the flies used in the experiments were

¹⁹⁰ See questions 19, 20 and 21 of the Panel to the scientific experts, Section VI of this Report.

¹⁹¹ Dr Geider, para. 6.114.

¹⁹² Dr Hale, para. 6.115.

¹⁹³ Dr Hale, para. 6.116; Dr Hayward, para. 6.120.

¹⁹⁴ Dr Hale, para. 6.117.

¹⁹⁵ Dr Smith, para. 6.122.

¹⁹⁶ Dr Geider, para. 6.114; Dr Hale, para. 6.118; Dr Hayward, para. 6.120: "insect species had characteristic patterns of behaviour, substrate and host preference."

¹⁹⁷ Dr Hale, para. 6.124.

¹⁹⁸ Dr Hayward, para. 6.125; Dr Smith, para. 6.126.

¹⁹⁹ Dr Smith, para. 6.126.

²⁰⁰ Dr Geider, para. 6.123.

²⁰¹ Dr Geider, para. 6.127.

vectors for the spread of fire blight. Drs Hale and Hayward referred to Taylor *et al.* (2003), which had documented the situation relating to the possible transmission of *E. amylovora* from discarded, infested, mature apple fruit to susceptible host tissues. Taylor *et al.* (2003) had been unable to recover the bacteria from insects trapped in the orchard or find any evidence of transmission from calyx-infested apples to susceptible hosts. Dr Hayward emphasized the importance of studies in orchard conditions and felt that more such studies should be carried out in these conditions.²⁰² For Dr Smith, it was simply not enough to work with any sort of fly. Other lines of studies could be envisaged, determining which insects in the field were attracted to rotten apples, or were found around pear or apple fruits. Dr Smith also recalled that the most significant result of Taylor *et al.* (2003) was that they were unable to recover the bacterium at all, from any insect tested.²⁰³

8.65 From the above, we conclude that the experts have confirmed the assertion of the United States that the Tsukamoto *et al.* (2005b) study does not establish that flies would serve as a vector which would complete the pathway. In particular, the conditions of the experiment are too removed from natural conditions. Comparatively, we note that the study by Taylor *et al.* (2003), carried out in natural conditions, did not recover bacterium from insects.

(ii) *Kimura et al. (2005)*²⁰⁴

8.66 Japan essentially claims that Kimura *et al.* (2005), using the results of Azegami *et al.* (2005) and Tsukamoto *et al.* (2005b) found that the quantitative risk of transmission of the disease by apple fruit was not insignificant. Kimura *et al.* (2005) also suggested an alternative explanation to the bacterial introduction to apple fruit. It could be through the pedicel, to the vascular tissue and the cortex (flesh), rather than through the calyx to the core. Japan also claims that Kimura *et al.* (2005) showed that the completion of the pathway by flies was not a theoretical risk but a real one.

8.67 The United States notes that Kimura *et al.* (2005) relied on Azegami and Tsukamoto's works. However, Kimura *et al.* (2005) misrepresented Azegami *et al.* (2005) by concluding that "even at a stage apple fruit gets ripe, it is likely enough that *E. amylovora* in fruit-bearing branches will infect the inside of apples." According to the United States, the Azegami *et al.* (2005) paper does not demonstrate that infection through the pedicel or abscission layer of a mature apple fruit is possible. Kimura *et al.* (2005) also cited Tsukamoto *et al.* (2005b) for the proposition that *E. amylovora* had been recovered from the "flesh" of apple fruit and not from the core, alleging that previous studies only sampled core tissues and therefore failed to identify *E. amylovora* in the apple fruit. However, previous studies described in Roberts *et al.* (1989) had examined a portion of the apple fruit that included the flesh discussed in Azegami *et al.* (2005), Tsukamoto *et al.* (2005b) and Kimura *et al.* (2005).

8.68 Having reviewed the arguments of the parties and third parties, we consider that for the purposes of the Panel's assessment, the main issue relating to the Kimura *et al.* (2005) study is the reliance of this study on Azegami *et al.* (2005) and Tsukamoto *et al.* (2005b).

8.69 The experts consulted by the Panel considered that the Kimura *et al.* (2005) study depended heavily on the validity of the basic assumptions.²⁰⁵ Drs Hale and Hayward concurred in saying that the Kimura *et al.* (2005) study relied heavily on the infection study made by Azegami *et al.* (2005) and the pathway studies by Tsukamoto *et al.* (2005a, b)²⁰⁶, which did not provide any evidence that

²⁰² Dr Hayward, para. 6.131.

²⁰³ Dr Smith, para. 6.132.

²⁰⁴ For a description of the study, see paras. 4.57-4.67 above.

²⁰⁵ Dr Geider, para. 6.133.

²⁰⁶ Dr Hale, para. 6.134; Dr Hayward, para. 6.135. Dr Smith judged the probability estimates in Kimura *et al.* (2005) to be "debatable" (para. 6.137).

the pathway for disease, from infected fruit to susceptible host tissues, could be completed under natural ecological conditions. The fact that Kimura *et al.* (2005) assumed that the pathway could be completed by flies under natural ecological conditions was not supported by the published record.²⁰⁷

8.70 We conclude, in light of the arguments of the parties and the opinion of the experts that the Kimura *et al.* (2005) study does not provide sufficient scientific support for the quantification of the risk of completion of the pathway.

(d) Conclusion

8.71 From the above, we conclude that the new studies submitted by Japan do not provide sufficient scientific evidence to establish, in natural conditions, the risks which Japan tries to support with those studies that:

- (a) mature and symptomless apples can nonetheless harbour endophytic bacteria (latent infection); and that
- (b) the pathway would likely be completed between a discarded infested/infected apple and a host plant in Japan, so as to lead to the establishment and spread of fire blight in Japan.

8.72 Having reached that conclusion, we move to assess the existence of a *rational relationship* between the scientific evidence and each element of the compliance measure.

3. Review of each element of the compliance measure

(i) *Introductory remarks*

8.73 We note that both the scientific evidence available and the views of the experts consulted by the Panel support the assertion of the United States that mature, symptomless apples are unlikely to transmit fire blight to host plants in Japan. The scientific evidence available and the experts consulted by the Panel also concur on the view that the transmission of fire blight to a host in Japan by an infected apple is unlikely. As mentioned by Dr Smith before the Original Panel, "from a scientific position, the logical conclusion of saying that there is an absolutely negligible risk of movement of fire blight with fruits is in fact a completely unrestricted trade."²⁰⁸

8.74 However, we recall that, neither before the Original Panel nor before this Panel, did the United States request to be entitled to export apples under whatever conditions it wants. Rather, the United States has suggested that it should be entitled to export mature, symptomless apples. The Original Panel concluded that the concepts of "mature" and "symptomless" were relevant in terms of contamination of the fruit and scientifically pertinent.²⁰⁹ This conclusion is not affected by the evidence submitted before this Panel. Both the relevant scientific evidence and the opinions of the experts consulted by the Panel support the view that limiting exports of apples from the United States

²⁰⁷ Dr Hale added that Taylor *et al.* (2003) had established that insects do not become contaminated with *E. amylovora* from infested fruit discarded in an orchard when susceptible host tissue was in abundance. Hale *et al.* (1996) had also reported that there was no detectable spread of *E. amylovora* from heavily infested calyxes and fruit surfaces to blossom clusters, immature or mature fruits. Taylor *et al.* (2003a) also found that the population levels of *E. amylovora* required for infection of susceptible host tissues under orchard conditions far exceeded the levels likely to be present in infected apple calyxes at harvest and after cold storage (para. 6.129).

²⁰⁸ Panel Report on *Japan – Apples*, para. 8.173.

²⁰⁹ Panel Report on *Japan – Apples*, paras. 8.115 and 8.118.

to mature, symptomless fruits would ensure that such shipments do not contaminate host plants in Japan.

8.75 We note that the United States proposes to export only mature, symptomless apples, and has also expressed its commitment, through its own legislation (the US Apple Export Act) to export only mature, symptomless apples. Since scientific meaning can be attached to the concepts of "mature" and "symptomless" apples, we consider such a commitment to be, in principle, an objective and verifiable one. We note that the experts stated that export quality controls have to be established and also verified.²¹⁰ We also note Japan's repeated concern that something other than mature, symptomless apples could be exported by mistake. We further recall that the concept of mature, symptomless apples is scientifically pertinent,²¹¹ and therefore a verifiable one. However, whether the controls currently in place to ensure that apples are mature and symptomless may be subject to discussion, as evidenced by Japan's arguments. This said, we assume that if the United States is ready to export only mature, symptomless apples and if, as evidenced by its position, the United States believes that "mature" and "symptomless" are objective concepts, then the United States should have no objection to measures necessary to control that shipments are actually composed only of mature, symptomless apples. We therefore consider that we should carry out our review of the elements of the compliance measure starting from the hypothesis that what is exported in principle is mature, symptomless apples.

8.76 In our examination of Japan's requirement, some elements of the measure will be reviewed together, because they relate to different aspects of the same concern.

(ii) *Requirement that: (a) fruit be produced in a designated fire blight-free orchard; (b) the export orchard be free of plants infected with fire blight; (c) the orchard and surrounding buffer zone be inspected once per year at early fruitlet stage; and (d) detection of a blighted tree in this area by inspection will disqualify the orchard*

Summary of the arguments of the parties²¹²

8.77 The United States argues that there is no scientific evidence that a fruit from a tree infected with fire blight poses a risk of transmission of fire blight if the fruit is mature and symptomless. Therefore, there is no rational relationship between the scientific evidence and Japan's requirement that apples be sourced from fire blight-free orchards.

8.78 According to Japan, the experts before the Original Panel expressed caution against exporting apples from (severely) blighted orchards. In addition, Japan considers that the potential of infection of mature apple fruit through pedicels or surface wounds would be more pronounced when the tree is severely blighted.

8.79 The United States notes that there is no scientific evidence to justify a measure restricting the eligibility of growers or packers based on concerns regarding spread of fire blight. Japan might have legitimate reason to restrict exports from certain states because of other plant diseases and quarantine pests. However, Japan has no grounds to restrict those exports under the auspices of a fire blight-specific measure.

²¹⁰ Dr Hale, Transcript, Annex 3, para. 203; Dr Smith, para. 206.

²¹¹ See Panel Report on *Japan – Apples*, paras. 8.113 and 8.118.

²¹² A detailed account of the arguments of the parties can be found in paras. 4.70 to 4.114 of this Report.

8.80 Japan counters that the same measure applies to any state consistently with the Detailed Rules and the Operational Criteria. If the United States provides appropriate documentation of other quarantine pests and diseases, other states will be added to the eligible exporting locations.

8.81 The United States argues that the unjustified and unscientific nature of Japan's requirement is further demonstrated by considering that the requirement that orchards be free of fire blight means that a single fire blight strike on a single tree will disqualify all apple fruit in the orchard, even those tens, hundreds, or thousands of meters away from the source of inoculum.

8.82 Japan replies that scientists have recognized the risk of transmission of the disease from one tree to another adjacent tree. Japan argues that its definition is equivalent to the "(severely) blighted" condition referred to in the findings of the Original Panel.

8.83 The United States claims that the requirement for at least one inspection of both the orchard and the buffer zone at the early fruitlet stage to ensure that the orchard and buffer zone are free of fire blight bears no rational or objective relationship to the scientific evidence relating to apple fruit and fire blight.

8.84 In response, Japan states that the fruitlet stage is the best observation point for the fire blight infection of an orchard. If the orchard has already been (severely) blighted during the fruitlet stage, the orchard will likely produce a higher number of infected (immature) apples than otherwise. Similarly, the level of bacterial presence in a (severely) blighted orchard at the fruitlet stage may result in a higher probability of latent infection.

Analysis of the Panel

8.85 The four requirements referred to above are addressed together to the extent that they relate to the question whether a mature, symptomless apple harvested (a) from a blighted or severely blighted orchard; or (b) from an orchard where other blighted plants can be found could pose a threat with respect to the entry of fire blight into Japan.

8.86 We note that, before the Original Panel, the experts had expressed the opinion that "it would be appropriate not to export apples from (severely) blighted orchards"²¹³ and the Panel had interpreted this statement as evidence that some protection was justified by the state of the scientific evidence. In this proceeding, the experts further elaborated on the matter. Dr Smith noted that "it would not be possible to market successfully apples or pears from severely blighted orchards."²¹⁴ Dr Geider said "There may be no strict scientific basis to say that this is something that you should not do. On the other hand there are practical reasons. I think this is what we say is good practice so it's good orchard practice not doing that."²¹⁵ Dr Geider added that:

"There is some experience saying [apples from blighted orchards] are, in some cases, more infected in the calyx than apples from other orchards without fire blight. That would of course be very biased to have this precaution not to take the apples from the blighted orchards, but maybe this is the only reason I have. It is good commercial practice to obey limits of phytosanitary ordinance."

²¹³ Panel Report on *Japan – Apples*, para. 8.226.

²¹⁴ Dr Smith, Transcript, Annex 3, para. 183.

²¹⁵ Dr Geider, Transcript, Annex 3, para. 187.

8.87 Dr Hale stated that "it would not be economic to even harvest [fruits from severely blighted orchards], never mind export them."²¹⁶ He added that, in the case of a neglected orchard, "it usually means that the treatment will be the use of the chainsaw."²¹⁷ Dr Hayward concluded that "If we accept all sides of the evidence about mature symptomless fruit it should still be possible to harvest fruit from a severely blighted orchard without risk",²¹⁸ and Dr Smith added, with respect to neglected orchards which had been found to be severely blighted, that "a neglected orchard is neglected not only with respect to fire blight, it is also neglected with respect to codling moth and everything else. So that fruits cannot be taken from some orchards. This is an academic argument."²¹⁹ Thus, the reason for not exporting from a blighted orchard is essentially one of good agricultural and commercial practice. A severely blighted orchard will produce only a few mature, symptomless apples, and those apples could also be infected by other pests or disease if, in addition, the orchard is neglected.

8.88 We conclude from the above that if a mature, symptomless apple is harvested from a blighted orchard, even a severely blighted one, the likelihood that it will be infected has not been established. Infestation is possible, though unlikely. Indeed, it was determined by the Original Panel and not contested in this proceeding, that any epiphytic *E. amylovora* that could be found on the surface of mature, symptomless apples are unlikely to have the capacity to contaminate host plants.²²⁰ If neither infection nor infestation by populations of *E. amylovora* is likely to be found in mature, symptomless apples harvested from severely blighted orchards, it is even less likely to be found in apples from lightly blighted orchards or non-blighted orchards where a fire blight-infected plant has been found.

8.89 We have determined that available scientific evidence does not support the view that mature symptomless apples harvested from blighted orchards, whether severely blighted or not, or from non-blighted orchards where other plants have been found to be infected, would harbour populations of *E. amylovora* capable of spreading fire blight disease. It follows from this determination that the requirements that apple fruit come from a designated orchard²²¹, that the orchard be free of apple trees or other plants infected with fire blight, that the orchard and surrounding buffer zone be inspected once per year at the early fruitlet stage, and that detection of a blighted tree in this area by inspection will disqualify the orchard as a whole, cannot be considered to be supported by sufficient scientific evidence.

8.90 However, the Panel notes that orchard inspection may be part of good agricultural practices or even scientifically justified in relation to diseases other than fire blight.

²¹⁶ Dr Hale, Transcript, Annex 3, para. 188.

²¹⁷ Dr Hale, Transcript, Annex 3, para. 193.

²¹⁸ Dr Hayward, Transcript, Annex 3, para. 190.

²¹⁹ Dr Smith, Transcript, Annex 3, para. 194.

²²⁰ Panel Report on *Japan – Apples*, paras. 8.134-8.136.

²²¹ We note that, for the time being, only orchards from the states of Washington or Oregon may be designated. We do not consider it necessary to make a finding on this issue essentially because Japan stated that the exclusion of states other than Washington and Oregon results from the failure of the United States to provide documentation regarding quarantine pests and diseases other than fire blight in relation to other states. We note that if apples from states other than Oregon and Washington cannot be exported because the United States failed to comply with phytosanitary requirements relating to diseases other than fire blight, the fact that those apples may be free of fire blight will not make them exportable to Japan. Neither before this Panel nor before the Original Panel, did the United States demonstrate that Japan imposes measures relating to fire blight in relation to other quarantine pests or diseases. Since the restriction primarily relates to other pests or diseases, we see no reason to make a finding on it in this case.

(iii) *The fire blight-free orchard must be surrounded by a ten-meter buffer zone (or border zone) free of fire blight*

8.91 The United States claims that the requirement of a buffer zone is not scientifically justified. This is further demonstrated by considering that a fire blight-free requirement in a buffer zone means that trees tens, hundreds, or thousands of meters away from a potential source of inoculum will be disqualified for export to Japan.

8.92 Japan argues that the buffer zone is necessary to (i) clearly delineate and define an "export orchard," separate from the rest of the grounds and subject to phytosanitary requirements, and to (ii) prevent branches of trees inside the orchard from overlapping, or being in direct contact, with plants outside the orchard.

8.93 It has been established before the Original Panel that no buffer zone or border zone of any size was justified by the existing scientific data, as fruit harvested from blighted trees or adjacent to blighted trees had not harboured *E. amylovora*.²²² Experts before this Panel have confirmed the absence of scientific justification for imposing buffer zones or border zones. Referring to Roberts *et al.* (2002), both Dr Hale and Dr Hayward confirmed that no buffer zone of any size was justified by existing scientific data to provide phytosanitary protection, as mature, symptomless fruit, harvested from either blighted trees, or adjacent to blighted trees, did not harbour *E. amylovora*.²²³ This conclusion equally applied to resistant or least resistant varieties of apples.²²⁴

8.94 As mentioned above, our analysis is based on the premise that the product to be exported by the United States to Japan will be mature, symptomless apple fruit. If this is the case, i.e. apples are not infected and do not harbour viable epiphytic populations of *E. amylovora*, irrespective of whether they were harvested from a blighted tree or not, the requirement of a 10-meter border zone, to the extent that it is supposed to avoid the spreading of fire blight to non infected apple trees, is not supported by sufficient scientific evidence.

(iv) *Harvested apples must be treated with surface disinfection by soaking in sodium hypochlorite solution*

8.95 We note that Japan has asserted that the washing of apple fruit was part of the normal commercial treatment of US apples and hence caused no additional burden on US exporters. The United States argues that it applies surface disinfection as a result of Japan's requirement, as evidenced by its phytosanitary certificate form for exports to Japan.

8.96 The experts have expressed the view that surface disinfection is not regularly accepted commercial practice.²²⁵ It may even be harmful to human health.²²⁶ Moreover, Dr Hayward stated:

"Why would we treat mature symptomless apple fruit by any disinfestation process, say a chlorine solution or something of that nature? There is no evidence of an epiphytic population, even less after storage at low temperature following the work of Hale. The only site on the apple fruit, mature symptomless fruit which Dr Hale has identified, is the calyx. The calyx is a protected site and a surface disinfestation

²²² Panel Report on *Japan – Apples*, para. 8.189.

²²³ Dr Hale, paras. 6.68-6.69; Dr Hayward, para. 6.71.

²²⁴ Dr Hale, para. 6.69; Dr Hayward, para. 6.71.

²²⁵ Dr Smith, Transcript, Annex 3, para. 172; Dr Hale, para. 175.

²²⁶ Dr Geider, Transcript, Annex 3, para. 178.

process is not going to be effective because the calyx will not be reliably penetrated by the solution you are using to treat it."²²⁷

8.97 Having regard to the experts' opinions, we conclude that surface disinfection is not justified by scientific evidence to the extent that the existence of an epiphytic infestation of apple fruit by *E. amylovora* in quantities capable of reproduction and ultimately of infecting a host plant has not been established. Assuming that bacteria could be found in the calyx, the surface treatment required by Japan would not be effective in removing them.

(v) *The interior of the packing facility must be disinfected by a chlorine treatment*

8.98 The United States claims that there is no scientific evidence that apple fruit intended for export could be epiphytically contaminated with fire blight-causing bacteria in packing houses, much less that such contamination could then result in introduction of fire blight in Japan. Facility desinfestation is not standard in the US apple industry.

8.99 Japan argues that the disinfection of packing facilities by a chlorine treatment is a normal requirement in any process in that it only requires a level of sanitation typical in a commercial food production line.

8.100 The experts who expressed their views on the requirement that the interior of packing facilities be disinfected by a chlorine treatment queried how this requirement was different from the normal requirement of a certain level of sanitation.²²⁸ Moreover, Japan's legislation does not provide any particular detail on the requirement (e.g., regarding the frequency of disinfection).

8.101 We note that sanitation of packing facilities seems to be an established commercial practice.²²⁹ However, to the extent that the reason for such a requirement with respect to mature, symptomless apples is to avoid the transmission of epiphytic populations of *E. amylovora* to those apples during packing, there is no evidence that such transmission has ever occurred. Even if it were to occur, there is no scientific evidence that populations of *E. amylovora* would survive commercial handling and transport.²³⁰ Even assuming they would, completion of the pathway would require the completion of an additional sequence of events which is deemed unlikely and which has not been scientifically established to date.

8.102 As a result, we conclude that while proper sanitation may be required and seems to be established commercial practice, the scientific evidence does not justify chlorine disinfection of packing facilities in order to prevent contamination of mature, symptomless apples by *E. amylovora*.

(vi) *Fruit destined for Japan must be kept separate post-harvest from other fruit*

8.103 The United States argues that there is no scientific justification for the requirement that apple fruit destined for export to Japan be kept physically separate from other apple fruit.

8.104 According to Japan, the separation requirement is not specific to fire blight but a natural extension of the other control requirements. Referring to a statement by Dr Hale²³¹, Japan also recalls that separation of fruit destined for Japan would not be difficult given that many fruit exporters already have the capacity to separate fruit destined for different markets all over the world.

²²⁷ Dr Hayward, Transcript, Annex 3, para. 174.

²²⁸ Dr Smith, Transcript, Annex 3, para. 172; Dr Hayward, para. 174; Dr Hale, para. 175.

²²⁹ Dr Hale, Transcript, para. 175, regarding New Zealand.

²³⁰ See in this respect our conclusion regarding Tsukamoto *et al.* (2005a), para. 8.57 above.

²³¹ Dr Hale, Transcript, Annex 3, para. 175, regarding New Zealand.

8.105 Like the preceding elements of Japan's compliance measure, this requirement seems to derive from the perceived risk that apples destined for Japan could be contaminated by other apples. We consider that, if it were to occur, such contamination would only affect the surface of the fruit and the bacteria would be unlikely to survive commercial handling, storage and transportation in sufficient number to contaminate host plants in Japan. The experts consulted by the Panel have generally considered that preserving the integrity and security of consignments may be necessary in relation to pests or diseases other than fire blight.²³² However, there was no evidence that an apple fruit could become *infected* by *E. amylovora* as a result of a contact with infected fruit.²³³

8.106 The same considerations that lead us to conclude that the requirement of chlorine disinfection of packing facilities was not scientifically supported would lead us to conclude that this requirement also is not justified by sufficient scientific evidence. Indeed, since scientific evidence and the experts have confirmed that mature, symptomless apples are unlikely to harbour viable populations of epiphytic *E. amylovora*, we conclude that the requirement of separation of fruit destined for Japan is not supported by sufficient scientific evidence.

(vii) *US plant protection officials must certify that fruits are free from fire blight and have been treated post-harvest with chlorine*

8.107 Japan argues that the issuance of phytosanitary certificates is standard regulatory practice and does not result in any burden to US exporters. As a phytosanitary measure, the requirement is necessarily procedural. The United States argues that Japan maintains its post-harvest measures without sufficient scientific evidence.

8.108 This requirement relates to certification by US authorities. However, it relates to two separate aspects (a) certification that fruits destined for Japan are free from fire blight and (b) certification that the fruits destined for Japan have been treated post-harvest with chlorine. Accordingly, we will first address the question of certification in general. Thereafter, we will determine whether these two certification requirements in the present case are justified by sufficient scientific evidence.

8.109 We recall that the United States informed us that it had no fixed, required form for a phytosanitary certificate and that certificates were adjusted to the requirements of the importing countries. The United States provided us with copies of phytosanitary certificates which confirmed that certain treatments had been performed for codling moth (methyl bromide and cold storage) and *E. amylovora* (chlorine disinfection). We also recall that export certificates submitted by the United States certified that exported apples complied with the US Apple Export Act.

8.110 We first note that phytosanitary certificates are common procedural requirements. We agree with Japan that the issuance of phytosanitary certificates is standard regulatory practice.²³⁴ Second, whether a certification will be justified by scientific evidence will, in our opinion, generally depend on whether the measure, treatment, or action the completion of which has to be certified is itself justified by scientific evidence.

- *Certification that exported apples are free of fire blight*

²³² Dr Smith, Transcript, Annex 3, para. 155; Dr Hale, Transcript, Annex 3, para. 157; Dr Smith, Transcript, para. 158.

²³³ Dr Smith, Transcript, paras. 163 and 170; Dr Hayward, Transcript, para. 165; Dr Hale, Transcript, para. 167; Dr Geider, Transcript, para. 169.

²³⁴ Moreover, they may be required in order to certify the performance of quality controls, including those aimed at ascertaining that exported apples are mature and symptomless.

8.111 In respect of the requirement that US authorities certify that exported apples are free from fire blight, we first recall that fire blight is a recognized disease with serious consequences. The United States does not contest this. We also recall that fire blight does not currently occur in Japan. Japan is therefore scientifically justified in requesting certification that apples exported to its territory be free from that disease.²³⁵

- *Certification that exported apples have been treated post-harvest with chlorine*

8.112 As far as certification of chlorine treatment is concerned, we recall our findings regarding the scientific justification for chlorine treatment as such:²³⁶ that this requirement is not scientifically justified with respect to fire blight. In application of our reasoning in paragraph 8.110 above, we conclude that a certification requirement relating to a requirement which is itself not scientifically justified cannot be scientifically justified either.

(viii) *Japanese officials must confirm the US officials' certifications and inspect packing facilities*

8.113 We note that Japan argues that inspection at export/import stages would offer security for the risk of accidental shipment of observably infected apple fruit and inspection upon importation would be beneficial for determining symptoms which may have developed during shipping. The United States claims that inspection is a costly process borne by US exporters.

8.114 We first note that this requirement contains two distinct aspects: (a) confirmation of US official certifications by Japanese officials; and (b) inspection of packing facilities by Japanese officials. We further recall that confirmation under item (a) applies to two elements: (i) certification that exported apples are free from fire blight and (ii) certification that chlorine treatment has been applied to exported apples. We will address each of these elements individually hereafter.

8.115 We are of the view that, as for certification, whether confirmation or inspection in relation to a particular measure, treatment or action will be scientifically justified largely depends on whether such measure, treatment or action is itself scientifically justified. In other words, Japan is entitled to apply confirmation procedures in relation to requirements that Japan is scientifically justified to apply. Confirmation and inspection procedures can be legitimate phytosanitary instruments if they support measures necessary to address legitimate phytosanitary risks.

- *Confirmation by Japanese officials of certification by US officials*

Freedom from fire blight

8.116 Regarding the confirmation of the certification by US officials that exported apples are free from fire blight, we believe that the same reasoning should apply as for the certification requirement. We therefore conclude that Japan is entitled to have its officials confirm US official certifications that apples are free from fire blight as long as it does so in a manner compatible with the SPS Agreement, in particular Annex C thereof.

Chlorine treatment

²³⁵ We note in this respect that the United States already applies the requirement that export apples be fire blight-free under its domestic legislation. We recall that the requirement under US law is for exported apples to comply with the US Apple Export Act No. 1 Grade standard. The US Apple Export Act requires that exported apples be mature and symptomless, *and free of disease*.

²³⁶ See paras. 8.95-8.97 above.

8.117 In contrast, as far as the confirmation by Japanese officials of the certification of chlorine treatment of exported apples by US officials is concerned, we recall our findings regarding the scientific justification for chlorine treatment as such:²³⁷ this requirement is not scientifically justified. In application of our reasoning in paragraph 8.115 above, we conclude that a confirmation requirement applicable to a requirement which is itself not scientifically justified cannot be scientifically justified either.

- *Inspection of packing facilities by Japanese officials*

8.118 As far as the inspection of packing facilities is concerned, we also recall our findings regarding chlorine washing of apples, disinfection of packing facilities and separation of apples destined for Japan, which are to our knowledge the requirements that have to be complied with in the packing facilities.²³⁸ We recall that none of the above-mentioned requirements was found to be scientifically justified in relation to fire blight. As a result, we can only conclude that, to the extent that it relates to these requirements, inspection of packing facilities is not supported by scientific evidence.

(ix) *Summary of findings*

8.119 In conclusion, our findings in paragraphs 8.89, 8.94, 8.97, 8.102, 8.106, 8.111, 8.112, 8.116, 8.117 and 8.118 are that each element of the measure at issue, with the exception of the requirement that US plant protection officials certify that fruits are free from fire blight, and the related confirmation by Japanese officials, is not supported by sufficient scientific evidence.

4. Conclusion on Article 2.2 of the SPS Agreement

8.120 On the basis of the scientific evidence made available to us and the opinions of the experts, we conclude that the United States has made a prima facie case that the compliance measure at issue is not supported by sufficient scientific evidence. Japan has not rebutted this prima facie case.

8.121 This does not mean that no phytosanitary measure is justified. On the contrary, the United States claims to export mature, symptomless apples. To the extent that this constitutes a phytosanitary requirement, Japan would be entitled to verify that this is actually the case. We note that the need for verification that only mature, symptomless apples are exported has been confirmed by the experts.²³⁹

D. ARTICLE 5.1 OF THE SPS AGREEMENT

1. Approach of the Panel

8.122 Although the United States referred to paragraphs 1, 2, 3, 5 and 6 of Article 5 of the SPS Agreement in its request for establishment of a panel²⁴⁰ it has, in the course of these proceedings, only raised claims in relation to paragraphs 1 and 6 of Article 5. The US claims under Article 5.6 are addressed in the following section. In this section, we will address the US allegation exclusively in relation to a violation of Article 5.1.

8.123 Article 5.1 reads as follows:

²³⁷ See paras. 8.95-8.97 above.

²³⁸ See paras. 8.95-8.106 above.

²³⁹ Dr Hale, Transcript, Annex 3, para. 203; Dr Smith, para. 206.

²⁴⁰ WT/DS245/11.

"Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risk to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations."

8.124 We recall that, in our review of the measure at issue under Article 5.1, we need to take into account the context of this provision, which includes Article 5.2.²⁴¹ We are also mindful of the Appellate Body's observation that Article 2.2 informs Article 5.1 and that they should "constantly be read together".²⁴²

8.125 We also recall that the notion of risk assessment is defined in paragraph 4 of Annex A of the SPS Agreement. Paragraph 4 of Annex A of the SPS Agreement reads as follows:

"4. *Risk assessment* - The evaluation of the likelihood of entry, establishment or spread of a pest or disease within the territory of an importing Member according to the sanitary or phytosanitary measures which might be applied, and of the associated potential biological and economic consequences; or the evaluation of the potential for adverse effects on human or animal health arising from the presence of additives, contaminants, toxins or disease-causing organisms in food, beverages or feedstuffs."

8.126 As has been noted by previous panels, the general obligation reflected in Article 5.1 contains two elements:

- (a) an assessment of risk; and
- (b) that Members must ensure that their SPS measures are *based on* such an assessment.

8.127 We note that the United States claims that Japan's September 2004 risk assessment (hereafter the "2004 PRA") had failed to propose a valid scientific analysis of any "risk" of fire blight from the commodity exported by the United States: mature, symptomless apple fruit. Instead, it relied on the proposition that mature, symptomless, yet latently infected fruit would somehow reach the Japanese market; a proposition unsupported by Japan's studies, as they did not demonstrate that such a commodity could exist in the real world.

8.128 Japan argues that new evidence shows that the risk of completion of the pathway by US (infected) apple fruit from a (severely) blighted orchard was real, and even higher than thought at the time of the Original Panel. The 2004 PRA considered and compared a variety of phytosanitary measures to cope with the risk which had been established through laboratory studies and the findings and conclusions of the Original Panel.

8.129 The Panel notes that the practice in previous disputes, and indeed that which was followed by the Original Panel, was to consider first whether there existed an assessment, as appropriate to the circumstances, of the risk to plant health and, secondly, whether there was a rational relationship between the measure and the risk assessment. The consideration of whether there exists a risk assessment appropriate to the circumstances is not limited to a procedural review as to whether the risk assessment followed a certain form, *in casu* the IPPC Standards.²⁴³ More importantly, the substance of the PRA, that is the scientific evidence which is being evaluated, must support the

²⁴¹ Article 5.2 provided, *inter alia*, that "In the assessment of risks, Members shall take into account available scientific evidence".

²⁴² Appellate Body Report on *EC – Hormones*, para. 180. The text of Article 2.2 of the SPS Agreement is found in para. 8.34 above.

²⁴³ See para. 2.23, Appellate Body Report on *Australia – Salmon*, para. 121; Appellate Body Report on *Japan – Agricultural Products II*, para. 112.

conclusions of the PRA. This is particularly relevant in this case, given our analysis under Article 2.2 and our remark above on the Appellate Body's observation that Article 2.2 informs Article 5.1.

8.130 In light of the above, we will first examine the substantive validity of the 2004 PRA and, as appropriate, whether the PRA complies with certain procedural requirements attached to risk assessments. Second, we will determine whether the measure at issue is based on a valid risk assessment, in the sense of whether there is a rational relationship between the measure and the risk assessment.²⁴⁴

2. Existence of an assessment, as appropriate to the circumstances, of the risk to plant life or health

(a) Summary of the arguments of the parties²⁴⁵

8.131 Japan claims that the revised 2004 PRA considered all of the issues raised by Dr Hale at the Original Panel meeting with experts. In the 2004 PRA, Japan identified "US apple fruit" as a possible pathway for introduction of fire blight. The revised PRA then examined the probability of infection of US apple fruit, the survivability of *E. amylovora* during handling, storage and shipment and finally the completion of the pathway. The revised PRA also reviewed and assessed the necessity of individual elements of Japan's Systemic Approach.

8.132 The United States considers that, like the 1999 PRA, the 2004 PRA fails to address the commodity actually exported by the United States – mature, symptomless apple fruit – and instead relies on the existence of a commodity that does not exist in nature: mature, symptomless, yet latently infected apple fruit. In the absence of any scientific evidence of a fire blight-risk posed by mature, symptomless apple fruit, any risk analysis which concludes otherwise would not "take into account available scientific evidence," and would not meet the requirements for a risk assessment under Article 5.1.

8.133 Japan argues that the 2004 PRA meets the requirement of specificity of the risk assessment. The 2004 PRA took into account that apple fruit under the current US export practice might or might not be actually "mature" in the horticultural sense or "healthy" in the pathological sense, and addressed these risks accordingly.

8.134 The United States argues that Japan's 2004 PRA ignored US pre-harvest and post-harvest procedures for quality control. By failing to address actual US practices and disputing the effectiveness of those practices, Japan failed to take into account ISPM 11.

(b) Analysis of the Panel

8.135 We note that, in section 2-5, the 2004 PRA reaches the following conclusions:

"[w]hen an export orchard is severely blighted, it appears not prudent to ignore the risk of *E. amylovora* entering Japan through: (A) mature apple fruit internally affected with *E. amylovora*; (B) immature apple fruit infected with *E. amylovora*; (C) wounded/decayed apple fruit infected with *E. amylovora*. Once the bacteria enters Japan in significant populations, the bacteria will likely establish and spread in Japan, and cause great damage with extremely high economic consequences."

²⁴⁴ Appellate Body Report on *EC – Hormones*, paras. 193-194.

²⁴⁵ A more detailed account of the arguments of the parties can be found in paras. 4.140-4.142 and 4.160 of this Report.

8.136 As mentioned above, the Appellate Body in *EC – Hormones* agreed with the general consideration of the panel in that case that "Article 5.1 may be viewed as a specific application of the basic obligations contained in Article 2.2 of the SPS Agreement", including the obligation not to maintain a measure without sufficient scientific evidence. We recall that the scientific evidence which is being evaluated must support the conclusions of the 2004 PRA.²⁴⁶ Therefore, if the conclusions of the risk assessment are not sufficiently supported by the scientific evidence referred to in the 2004 PRA, then there cannot be a risk assessment appropriate to the circumstances²⁴⁷, within the meaning of Article 5.1.

8.137 In doing so, we are mindful that we are not supposed to conduct our own risk assessment or to impose any scientific opinion on Japan. Like the panels in *Australia – Salmon* and *Japan – Agricultural Products II*, we will only examine and evaluate the evidence, including the information we received from the experts advising the Panel, and the arguments put before us in light of the relevant WTO provisions.

8.138 We note that neither the United States nor the experts consulted by the Panel contest the conclusion in the 2004 PRA that immature apple fruit can be infected with *E. amylovora* and that wounded/decayed apple fruit can be infected with *E. amylovora*. This is not contested either in the relevant literature. The parts of the 2004 PRA conclusions contested by the United States are:

- (a) that apples exported from a severely blighted orchard could be mature but nonetheless internally affected with *E. amylovora*; and
- (b) that once the bacteria enters Japan in significant populations, the bacteria will likely establish and spread in Japan (completion of the pathway).

8.139 We note that Japan relies in the 2004 PRA on the very studies we reviewed under Article 2.2. We therefore need to determine whether the conclusions of the 2004 PRA are actually supported by the scientific evidence already addressed in the context of Article 2.2. The fact that we have found that the measure at issue was maintained without sufficient scientific evidence does not, in our view, enable us to dispense with making findings on Article 5.1. It remains for us to ascertain to what extent Japan actually relied, in the 2004 PRA, on the studies we considered in our review of the measure at issue in the context of Article 2.2.

8.140 We have already found, in the context of our examination of Japan's compliance measure under Article 2.2 of the SPS Agreement, that the studies relied upon by Japan do not support Japan's allegation that mature, symptomless apples can be latently infected. As confirmed by the experts, the studies relied upon by Japan do not demonstrate that such latent infection could occur in real orchard conditions. Likewise, we have also found that the studies relied upon by Japan do not support the view that apple fruit would be likely to complete the pathway and contaminate host plants in Japan under non-laboratory conditions. We stress the importance of our reference to "real orchard conditions" and "non-laboratory conditions". Indeed, as recalled by the experts, laboratory experiments may not reflect natural conditions, whereas production and trade in apples take place in the real world. Even if the studies relied upon by Japan actually confirmed latent infection and completion of the pathway, their relevance for the 2004 PRA could still be questioned, to the extent that the assessment must be appropriate to the circumstances. In this case, this implies that the assessment reflect the real production and trade conditions.

8.141 In Section 2-3-1-1(2)(A) of the 2004 PRA, Japan acknowledges the existence of a consensus among foreign fire blight experts that mature, symptomless apples are unlikely to be infected by the

²⁴⁶ See para. 8.124, above.

²⁴⁷ See Panel Report on *Australia – Salmon*, para. 8.57.

disease. However, Japan relies on Azegami *et al.* (2005) as conclusive demonstration that mature apple fruit are not immune or resistant to infection by *E. amylovora* in a laboratory study.

8.142 The conclusions drawn from Azegami *et al.* (2005) have been considered by the experts as not reflecting orchard conditions.²⁴⁸

8.143 The 2004 PRA also relies on Tsukamoto *et al.* (2005a) to establish the probability that *E. amylovora* will survive during transportation and storage (2004 PRA, section 2-3-1-2). The United States has argued and the experts have confirmed that the experimental conditions in Tsukamoto *et al.* (2005a) did not reflect commercial practice.

8.144 On the probability of *E. amylovora* transferring to and infecting suitable host plants (2004 PRA, section 2-3-1-4), Japan relies on Tsukamoto *et al.* (2005b). The United States has argued and the experts have confirmed that Tsukamoto *et al.* (2005b) did not reflect natural conditions.²⁴⁹

8.145 On the basis of the evidence before us, including the comments of the scientific experts consulted by the Panel²⁵⁰, we conclude that the new studies relied upon by Japan do not support the 2004 PRA conclusions that mature apples could be latently infected, nor the conclusion in the 2004 PRA that the pathway would likely be completed. Since the scientific evidence relied upon by Japan does not support the conclusions reached by Japan in its 2004 PRA, we conclude that the 2004 PRA is not an assessment, as appropriate to the circumstances, of the risks to plant life or health, within the meaning of Article 5.1 of the SPS Agreement.

8.146 Our approach is consistent with the view of the Appellate Body in *EC – Hormones*, whereby a WTO Member may choose to rely on a minority scientific opinion. The scientific studies relied upon by Japan cannot be assimilated to a minority opinion. As confirmed by the experts, these studies can be deemed to be scientific in nature. However, they do not objectively support what Japan would like to demonstrate, i.e. that mature apples could be latently infected and that the pathway would likely be completed in real conditions.

8.147 With respect to procedural requirements, we note the views expressed by the experts that the 2004 PRA formally followed most of the steps in ISPM 11.²⁵¹ However, having concluded that the 2004 PRA does not amount to a risk assessment because the scientific evidence relied upon does not support the conclusions drawn by Japan in the PRA, we see no need to make findings as to whether the 2004 PRA followed the procedural requirements applicable under the circumstances.

3. Is the measure at issue based on a risk assessment?

(a) Summary of the arguments of the parties²⁵²

8.148 The United States argues that Japan cannot claim that its new measure adopted in June 2004 is based on a risk assessment dated September 2004.

8.149 Japan responds that the PRA was available in mid-June, but the United States never requested it. Japan maintains that the only difference between the June PRA and the September revision is the reference to the status of studies which were more formally finalized after June.

²⁴⁸ See paras. 8.47-8.52 above.

²⁴⁹ See para. 8.65 above.

²⁵⁰ See paras. 6.148-6.158; Dr Hale, Transcript, Annex 3, para. 35.

²⁵¹ See Dr Hale, para. 6.147; Dr Hayward, para. 6.150: "The format of the revised PRA followed that of ISPM 11 closely"; Dr Smith, para. 6.151.

²⁵² A more detailed account of the arguments of the parties can be found in paras. 4.158 to 4.161 of this Report.

8.150 The United States claims that Japan failed to validate its revised measures through the production of the new PRA. Measures premised on the existence of "mature, symptomless but latently infected apples" and a non-existent pathway for introduction, establishment and spread of fire blight do not rationally relate to a risk assessment that failed to identify any scientific evidence supporting these premises.

8.151 According to Japan, its 2004 PRA shows that there is a rational relationship between the evidence and the measure, consistent with Article 2.2. Potential/actual infection of apple fruit poses a risk of introduction of the disease.

(b) Analysis of the Panel

8.152 We first address the argument of the United States that the measure at issue is not based on the 2004 PRA because the 2004 PRA is dated September 2004 whereas the measure at issue itself dates back to 30 June 2004.

8.153 We note the argument of Japan that the 2004 PRA was actually completed by mid-June and that the only difference between the June version and the September version of the PRA was the reference to the status of the studies which were finalized after June 2004.

8.154 We recall that the Panel in *Australia – Salmon (Article 21.5 – Canada)* rejected an argument similar to that of the United States. In that case, the new measures had been published on 19 July 1999, whereas the Australian risk assessment for these amended measures was only published in its final form on 12 November 1999. The Panel noted in that case that the amendments made in the final version of the risk assessment did not alter the substance or the conclusions of the report as announced on 19 July 1999.²⁵³

8.155 In the present case, Japan produced two versions of its PRA, one in June 2004²⁵⁴ and one in September 2004.²⁵⁵ A review of the two documents shows no substantive difference between the two texts. As stated by Japan, the differences are of an editorial nature. The fact that the final version of the 2004 PRA is subsequent to the adoption of the measure at issue does not preclude the measure from being based on the 2004 PRA. All substantive elements and conclusions of the PRA were already included in the June version of the 2004 PRA. Japan states that this version was completed in mid-June, i.e. before the adoption of the new measures. Even though the PRA was not published, we have no reason to question Japan's statement.

8.156 Second, with respect to the argument of the United States that there is no rational relationship between the measure at issue and the 2004 PRA, we recall our finding above that the 2004 PRA does not amount to a risk assessment appropriate to the circumstances. We conclude, as a consequence, that Japan's compliance measure is not based on a risk assessment, within the meaning of Article 5.1.

4. Conclusion on Article 5.1 of the SPS Agreement

8.157 For the reasons mentioned above, we conclude that the United States has made a prima facie case that the compliance measure at issue is not "based on an assessment, as appropriate to the circumstances, of the risk to [...] plant life or health" in Japan, within the meaning of Article 5.1 of the SPS Agreement. Japan has not rebutted that prima facie case.

²⁵³ Panel Report on *Australia – Salmon (Article 21.5 – Canada)*, paras. 7.76-7.77.

²⁵⁴ Exhibit JPN-17.

²⁵⁵ Exhibit JPN-3.

E. ARTICLE 5.6 OF THE SPS AGREEMENT

1. Introduction

8.158 Article 5.6 reads as follows:

"Without prejudice to paragraph 2 of Article 3, when establishing or maintaining sanitary or phytosanitary measures to achieve the appropriate level of sanitary or phytosanitary protection, Members shall ensure that such measures are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility."
[Footnote 3]

8.159 Footnote 3 to Article 5.6 reads as follows:

"For purposes of paragraph 6 of Article 5, a measure is not more trade-restrictive than required unless there is another measure, reasonably available taking into account technical and economic feasibility, that achieves the appropriate level of sanitary or phytosanitary protection and is significantly less restrictive to trade."

8.160 We recall that the Original Panel exercised judicial economy with respect to the US claim of violation of Article 5.6 of the SPS Agreement.²⁵⁶

8.161 In these proceedings, we need to take into account the request of the parties for specific findings²⁵⁷ as well as the fact that we are at the compliance stage. Moreover, as mentioned above, we have decided to assess the legality of each element of the measure. A finding under Article 5.6 becomes useful to assess the extent to which Japan may still need to modify its legislation in order to comply with the recommendations and rulings of the DSB.²⁵⁸

8.162 In doing this, we shall apply the three-pronged test confirmed by the Appellate Body in *Australia – Salmon*, i.e. determine whether there is an alternative SPS measure which:

- (a) is reasonably available taking into account technical and economic feasibility;
- (b) achieves the Member's appropriate level of sanitary or phytosanitary protection; and
- (c) is significantly less restrictive to trade than the SPS measure contested.

8.163 We now proceed with the review of the arguments of the parties for each of these elements which, as recalled by the Appellate Body, have to be applied cumulatively.

2. "Reasonably available taking into account technical and economic feasibility"

(a) Summary of the arguments of the parties²⁵⁹

8.164 The United States claims that a measure restricting imports to Japan to mature US apple fruit is reasonably available taking into account technical and economic feasibility. US federal laws (the US Export Apple Act) and regulations already ensure that export apple fruit are mature. US quality

²⁵⁶ Panel Report on *Japan – Apples*, para. 8.303.

²⁵⁷ United States, para. 4.115; Japan, para. 4.69.

²⁵⁸ See Appellate Body Report on *Australia – Salmon*, para. 223.

²⁵⁹ A more detailed account of the arguments of the parties can be found in paras. 4.164-4.173 of this Report.

control measures for apple fruit involve several pre-harvest and post-harvest steps that ensure that the final exported product is mature apple fruit. The measures include: pre-harvest testing of soluble solids, starch-iodine and/or firmness to ensure that apple fruit meet requirements for storage as well as consumer demands; consultation with industry horticulturalists in making harvesting decisions; storage on arrival at the packing facility in regular cold rooms or controlled atmosphere cold rooms; packing according to one of two available protocols, "direct pack" or "pre-size"; and inspection by Federal and/or Federally-licensed State inspectors. US apple producers do not ship immature apple fruit since this type of shipment would be rejected by the importer, result in economic loss for the exporter, adversely affect the reputation of US apple fruit in export markets, as well as potentially run afoul of the provisions of the US Export Apple Act.

8.165 The United States further argues that the risk of failure of commercial quality controls is hypothetical. Indeed there was no evidence that the billions of apple fruit shipped internationally (a vast number of which were shipped without SPS measures for fire blight) have ever introduced fire blight into a fire blight-free area.

8.166 Japan argues that the United States proposes that products should meet "US No.1 Grade" specifications but does not include specifics about test methods for verification. By failing to provide test methods or ways to achieve the specification, the United States has not established any "measure" worth considering. The alternative measure proposed by the United States is nothing other than the "current commercial practice" which the industry applies elsewhere. Not only is there no evidence or assurance that the products from this process will be "mature [and] symptomless" in terms of their quality, but there is no evidence that the process specifications achieve Japan's appropriate level of protection (ALOP).

8.167 According to Japan, the concept of the mature, symptomless apple fails to take into account (potential) risks associated with (i) failure of the inspection mechanism at the shipping (release) stage, or (ii) the new discovery of non-observable potential infection inside the apple fruit.

8.168 Japan further argues that the United States seeks to rely on the previous export experience with other countries to which the United States previously shipped apple fruit without any phytosanitary measure and which did not suffer from the spread of fire blight from the shipments. Japan emphasizes that the natural environment of these areas (including Chinese Taipei) was significantly different from that of Japan. Japan also notes that US inspectors in charge of certification incur no risk of liability. Finally, Japan refers to instances where codling moth was identified in shipments of US apples to Chinese Taipei as an illustration of failure in the US apple export control.

(b) Analysis of the Panel

8.169 We understand that the alternative measure proposed by the United States would consist of requiring that only mature, symptomless apples be exported to Japan.²⁶⁰ Such a requirement is undeniably "reasonably available taking into account technical and economic feasibility" since this is the requirement already applied by the United States under the US Apple Export Act for all exports abroad.

8.170 We note Japan's argument that the requirement that apples be mature and symptomless is only a quality standard and the result of "current commercial practices". We first note that this is not completely correct since the standards are specified in legislation and subject to control by duly licensed government inspectors. We also note that, as currently applied, the alternative measure

²⁶⁰ See para. 8.174 below description of apples meeting US "No. 1 Grade", United States Standards for Grades of Apples, 7 C.F.R., §§ 51.301, and 51.302.

proposed by the United States appears to be a combination of public and private interventions. We see no reason to reject *a priori* the alternative measure proposed by the United States simply because it is the result of commercial practices rather than of administrative requirements or because it involves private operators and not exclusively public authorities. However, in any case, sufficient guarantees must be in place to provide adequate assurances that such practices or requirements, whether public or private, will be adhered to.

8.171 We are of the view that, when considering whether an alternative measure is reasonably available taking into account technical and economic feasibility, we should determine whether the alternative measure would constitute an option reasonably available taking into account technical and economic feasibility in the real world. In our opinion, the risk of incorrect enforcement is part of the technical feasibility of a measure.

8.172 We are mindful of Japan's argument according to which the requirement that apples be mature and symptomless is simply a "product specification" and not a phytosanitary measure because it provides for no test methods for verification or ways to achieve the specification.

8.173 We agree that the requirement that apples be mature and symptomless could appear not to constitute a phytosanitary measure at a first sight. However, the United States has provided scientific evidence, and the experts have confirmed that, mature, symptomless apples do not harbour endophytic or epiphytic populations of *E. amylovora* (i.e. a quantity of bacteria capable of transmitting fire blight). As a result, requiring that apples be mature and symptomless is a phytosanitary measure to the extent that such requirement is based on the scientific evidence that mature, symptomless apples will not contaminate host plants.

8.174 With regard to Japan's argument that the United States does not provide for any specifications in relation to mature, symptomless apples, and that no test method is provided, we first note that the United States has informed us of the requirement of the US Apple Export Act for "US No. 1 Grade", according to which the apple must be:

"[m]ature but not overripe, carefully handpicked, clean, fairly-well formed; free from decay, internal browning, internal breakdown, bitter pit, Jonathan spot, scald, freezing injury [...] and broken skin or bruises except those which are incident to proper handling and packaging [;] free from damage caused by sunburn or sprayburn, limb rubs, hail, drought spots, scars, stem or calyx cracks, disease, insects, [or] damage by other means."²⁶¹

8.175 We also note that the US legislation defines maturity as:

"The apples have reached the stage of development which will insure the proper completion of the ripening process."²⁶²

8.176 Finally, we recall that the United States has informed us that quality controls for apple fruit involve several pre-harvest and post-harvest steps which, according to the United States, ensure that the final exported product is mature apple fruit. These controls include: pre-harvest testing of soluble solids, starch-iodine and/or firmness to ensure that apple fruit meet requirements for storage as well as consumer demands; consultation with industry horticulturalists in making harvesting decisions; storage on arrival at the packing facility in regular cold rooms or controlled atmosphere ("CA") cold rooms; packing according to one of two available protocols, "direct pack" or "pre-size"; and inspection by Federal and/or Federally-licensed State inspectors.

²⁶¹ United States Standards for Grades of Apples, 7 C.F.R. §§ 51.301, and 51.302.

²⁶² 7 C.F.R. § 51.312.

8.177 In light of the above, we consider that the United States has sufficiently demonstrated that such quality controls could provide sufficient guarantees to reasonably ensure that the product exported is mature, symptomless apples.

8.178 While we disagree with Japan, for the reasons given in our discussion of scientific evidence under Article 2.2, that mature apples could be internally yet not visibly infected, thus making the maturity requirement and the external control for symptoms insufficient, we cannot exclude that the inspection system put in place by the United States might, on some occasions, fail to guarantee that all exported apples are mature and symptomless. However, we note that there is no evidence that this has occurred in the past.²⁶³ In particular Japan, as the party claiming that such risk exists, did not provide evidence that this has ever happened. Japan only refers to the failure of US export controls in relation to codling moth presence in shipments to Chinese Taipei. However, we note that the Appellate Body agreed in the original case that there was no reason for the Panel to infer from the examples relating to codling moth that apples other than mature, symptomless ones had ever been exported from the United States to Japan.²⁶⁴ Finally, we note the difference between an apple infested by codling moth and an apple infected by *E. amylovora*. One will simply show a pin hole whereas the other one will be rotten or shrivelled.

8.179 We also note that Japan failed to provide sufficient scientific evidence that a contaminated apple was likely to complete the pathway and allow the establishment or spread of fire blight in Japan. In other words, even if the controls set up by the United States were to fail on a given occasion, the fact that the importation of something else than a mature, symptomless apple in a shipment destined for Japan could lead to the establishment and spread of fire blight is unlikely.²⁶⁵

8.180 Finally, we note that Japan may establish mechanisms appropriate to the circumstances and compatible with the SPS Agreement, to ensure that only mature, symptomless apples are imported into its territory.

8.181 For these reasons, we consider that the United States has demonstrated that the requirement that apples imported into Japan be mature and symptomless is an alternative measure that is reasonably available taking into account technical and economic feasibility.

3. "Significantly less restrictive to trade"

(a) Summary of the arguments of the parties²⁶⁶

8.182 The United States argues that a restriction of imports to mature US apple fruit would be significantly less trade-restrictive than the nine-measure import regime currently maintained by Japan. The extremely low level of US apple fruit imports to Japan and the corresponding high levels of economic risk to which US apple growers are exposed as a result of the measure at issue is evidence of its trade restrictive effect. For example, if a single fire blight strike is detected in a grower's orchard, or in the buffer zone surrounding the orchard, the grower's investment is lost as his apple fruit are no longer exportable to Japan. As a result of this risk, Japan's trade-restrictive apple fruit import regime has, over time, eliminated the incentive for US growers to attempt to export to Japan, thus protecting Japanese growers from competition.

²⁶³ See para. 4.81 and footnote 51 above.

²⁶⁴ Appellate Body Report on *Japan – Apples*, footnote 289.

²⁶⁵ Dr Hale, para. 6.160; Dr Hayward, para. 6.161; Dr Smith, para. 6.162.

²⁶⁶ A more detailed account of the arguments of the parties can be found in paras. 4.183-4.190 of this Report.

8.183 The United States further notes that the proposed alternative measure of restricting imports to mature apple fruit is significantly less trade-restrictive. Under the proposed alternative, entire orchards would no longer be disqualified upon discovery of a single fire blight strike on a tree or in a buffer zone, and all mature apple fruit would be eligible for export to Japan. If imports were restricted to mature apple fruit, US apple growers would financially be able to compete to fill orders for export to Japan.

8.184 Japan recalls that even though the Original Panel found that "mature, symptomless" is a "relatively objective concept," it never found that what the US apple industry ships would be "mature, symptomless" apple fruit. The issue of how to ensure that quality, or the relevant specifications and test methods, is therefore an entirely open issue in this proceeding.

8.185 Japan stresses that "mature, symptomless apple fruit" is a "product specification." These types of specifications typically describe (i) required qualities/parameters and (ii) test methods to ensure the qualities together with acceptable allowances. The United States has not provided the "mature, symptomless" specifications. Instead, it describes the "multiple processes" to ensure the quality of apple fruit shipped by US growers and equates these processes with the specifications. The United States calls the apples produced through a process compliant with these specifications as "mature, symptomless," without regard to their true quality. As such, the "mature, symptomless" apples as defined by the United States might or might not match the definition of mature, symptomless apple fruit.

(b) Analysis of the Panel

8.186 We note that the United States not only states that the requirement to export only "mature, symptomless apples" would be significantly less trade restrictive, it also suggests to apply this requirement in lieu of the measure at issue. We can infer from this that the measure would actually be "significantly less trade restrictive", or at least that it would satisfy the United States as being significantly less trade restrictive. We note that Japan does not contest this. Actually, Japan criticizes the US proposal by stating that it would be allowing the United States to export whatever it wants. The United States has also asserted that the current measure entailed costs for apple growers and exporters.

8.187 We note that a requirement that the United States do what it claims to be already doing under its national legislation would certainly be significantly less trade restrictive than a combination of requirements which undeniably impose constraints on US exporters, as evidenced by the fact that, in spite of their desire to export apples to Japan, which seems to be at the origin of this case, US growers have not exported apples since 2002.

8.188 We conclude that the United States has demonstrated that the requirement to import only mature, symptomless apples would be "significantly less trade restrictive" than the measures at issue.

4. Achieving Japan's "appropriate level of [...] phytosanitary protection"

(a) Summary of the arguments of the parties²⁶⁷

8.189 The United States claims that, in light of the scientific evidence relating to mature apple fruit and fire blight, a measure restricting imports to mature apple fruit would achieve 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.

²⁶⁷ A more detailed account of the arguments of the parties can be found in paras. 4.174-4.182 of this Report.

8.190 Japan argues that its ALOP is the level of protection that provides a security level which will not compromise Japan's status as a fire blight-free country through commercial shipment of fresh apple fruit, in the absence of illicit acts. Individual travellers carrying small shipments (illegally) might pose a threat, but the risk is insignificant and inevitable. Japan's ALOP against fire blight has not changed even though the measure has been changed.

8.191 The United States argues that, as the Original Panel has found, scientific evidence does not establish that mature, symptomless apple fruit would be infected with or harbor endophytic populations of *E. amylovora*; that mature, symptomless apple fruit would be infested with epiphytic populations of *E. amylovora* capable of transmitting fire blight; or that apple fruit, regardless of its maturity, would serve as a pathway for the introduction of fire blight into Japan. Therefore, a measure requiring shipments to be mature US apple fruit would meet Japan's ALOP because mature apple fruit did not present a risk of introduction of fire blight into Japan.

8.192 Japan notes that the Original Panel's finding of completion of the pathway was made relative to the measure then in place, and should not be interpreted to imply a comprehensive denial of any risk whatsoever. Moreover, Japan's new evidence, as interpreted together with the previous evidence, signal a risk posed by apples from a (severely) blighted orchard, which might not be healthy or mature. The US proposal does not address the issues arising from permitting exportation of US apple fruit from a "(severely) blighted" orchard, or the risk of infection or sorting errors for apples from such an orchard.

(b) Analysis of the Panel

8.193 We first recall that it is for Japan to determine its ALOP, and that we should not question it. We note that Japan describes its ALOP as equivalent to the one that would result from an import ban on commercial apples. We have already addressed the question of the latent infection of mature apples and reached the conclusion that it had not been sufficiently scientifically established. Since there is no evidence that mature, symptomless apple fruit will complete the pathway for the entry, establishment or spread of fire blight into Japan, we agree that the requirement that apples be mature and symptomless theoretically meets Japan's ALOP. We note that Japan insists in its argumentation on the risk attached to inspection error or non-compliance with the US prescription that exported apples be mature and symptomless. We have mentioned above that Japan had failed to demonstrate that such error had occurred. Japan also failed to demonstrate before the Original Panel that apples, even if they were not mature or symptomless, would be likely to complete the pathway. We do not believe that the United States requests Japan to accept whatever it exports. The United States not only claims to export mature, symptomless apples, it applies standards and tests to ensure that only mature, symptomless apples are exported. Japan is free to establish mechanisms, as appropriate to the circumstances and compatible with the SPS Agreement, to ensure that apples imported from the United States are mature and symptomless.

8.194 With respect to the effectiveness of a requirement that export be limited to mature, symptomless apples, we recall that the experts have confirmed their previous conclusions that mature, symptomless apples are unlikely to complete the pathway and contaminate a host plant in Japan.²⁶⁸ In other words, we agree with the United States, on the basis of the scientific evidence available and having regard to the opinions of the experts, that restricting imports exclusively to mature, symptomless apples could meet Japan's ALOP.

8.195 With respect to the implementation of the measure, we agree with Japan that its ALOP may not be met by the US requirement if sufficient guarantees are not obtained in terms of implementation.

²⁶⁸ Dr Geider para. 6.142, Dr Hale para. 6.143, Dr Hayward para. 6.144 and Dr Smith para. 6.145.

However, this has nothing to do with the requirement that apples be mature and symptomless, but with the controls necessary to enforce the requirement.

8.196 We therefore conclude that the United States has demonstrated that the requirement that apples imported into Japan be mature and symptomless is an alternative measure that could meet Japan's ALOP.

5. Conclusion on Article 5.6 of the SPS Agreement

8.197 We note that Japan is concerned about the importation of other apples than mature, symptomless apples. We note that the United States does not claim that it wants to export anything other than mature, symptomless apples. Thus, what we are looking at is a measure consisting of exporting mature, symptomless apples. If the United States only exports mature, symptomless apples, the alternative measure proposed by the United States meets the requirements of Article 5.6 as a substitute to Japan's current measure.

8.198 We therefore conclude that the United States has made a prima facie case that the measure at issue does not comply with the requirement of Article 5.6. Japan has not rebutted this prima facie case.

8.199 Finally, the Panel would like to clarify that even though it chose to examine the measure proposed by the United States as an alternative that would be reasonably available, meet Japan's appropriate level of phytosanitary protection and would be significantly less trade restrictive, this does not mean that this measure is necessarily the only one meeting the requirements of Article 5.6 and available to Japan. However, it is an indication of a solution which could be available, provided appropriate means of control are put in place to give adequate assurances that apples exported from the United States are mature and symptomless.

F. ARTICLE XI OF GATT 1994

1. Summary of the arguments of the parties²⁶⁹

8.200 The United States claims that, since Japan's measures are not legitimate SPS measures, they are non-tariff trade barriers breaching Article XI of GATT 1994. According to the United States, there is no dispute that Japan's measures restrict imports of apples through means other than duties, taxes or other charges.

8.201 Japan argues that since the new measure is consistent with the relevant Articles of the SPS Agreement, it is presumed to be covered by Article XX(b) of GATT 1994, pursuant to Article 2.4 of the SPS Agreement.

2. Analysis of the Panel

8.202 We have found above that the measure taken by Japan to comply with the recommendations and rulings of the DSB violates Article 2.2, 5.1 and 5.6 of the SPS Agreement. We recall that the Original Panel exercised judicial economy with respect to the United States claims relating to Article XI of GATT 1994, in line with other panel's exercise of judicial economy in similar situations of violation of the SPS Agreement. We note that none of the parties contested the decision of the Original Panel before the Appellate Body in this respect and see no reason why we should follow a

²⁶⁹ A more detailed account of the arguments of the parties can be found in paras. 4.191-4.192 of this Report.

different approach under Article 21.5 of the DSU. We therefore exercise judicial economy with respect to the United States claim regarding Article XI of GATT 1994.

8.203 Since we have found that the phytosanitary measure at issue is inconsistent with the requirements of the SPS Agreement, we see no need to further examine whether this measure is also inconsistent with Article XI of GATT 1994.

G. ARTICLE 4.2 OF THE AGREEMENT ON AGRICULTURE

1. Summary of the arguments of the parties²⁷⁰

8.204 The United States claims that Japan's measures are also non-tariff barriers in breach of Article 4.2 of the Agreement on Agriculture. There was no dispute that Japan's measures fall within the scope of footnote 1 to Article 4 of the Agreement on Agriculture, that they are restrictions on imports of apples and that these restrictions have not been tariffed.

8.205 Japan argues that the new measure is consistent with Article 4.2 of the Agreement on Agriculture, as it is a phytosanitary measure fully consistent with the SPS Agreement and thus is maintained under "other general, non-agriculture-specific provisions of GATT 1994 or of the other Multilateral Trade Agreements in Annex 1A of the WTO Agreement," as defined in footnote 1 to Article 4.2.

2. Analysis of the Panel

8.206 We have found above that the measure taken by Japan to comply with the recommendations and rulings of the DSB violates Article 2.2, 5.1 and 5.6 of the SPS Agreement. We recall that the Original Panel exercised judicial economy with respect to the US claims relating to Article 4.2 of the Agreement on Agriculture. We note that none of the parties contested the decision of the Original Panel before the Appellate Body in this respect and see no reason why we should follow a different approach under Article 21.5 of the DSU. We therefore exercise judicial economy with respect to the US claim regarding Article 4.2 of the Agreement on Agriculture.

8.207 Since we have found that the phytosanitary measure at issue is inconsistent with the requirements of the SPS Agreement, we see no need to further examine whether this measure is also inconsistent with Article 4.2 of the Agreement on Agriculture.

H. OTHER CLAIMS INCLUDED IN THE REQUEST FOR THE ESTABLISHMENT OF THE PANEL

8.208 The United States request for establishment of a panel in the context of its recourse to Article 21.5 of the DSU also alleged the inconsistency of the measure at issue with Articles 2.3, 5.2, 5.3, 5.5, 6.1 and 6.2 of the SPS Agreement. Technically, these claims are part of our terms of reference. We note, however, that in order for us to make findings on these claims, the United States should have made a prima facie case for each of them. The United States did not develop any argumentation regarding these provisions in its subsequent submissions.

8.209 Under those circumstances, we refrain from making any finding regarding the consistency or not of the measure at issue with Articles 2.3, 5.2, 5.3, 5.5, 6.1 and 6.2 of the SPS Agreement.

²⁷⁰ A more detailed account of the arguments of the parties can be found in paras. 4.193-4.194 of this Report.

IX. CONCLUSION

9.1 In light of the findings above, we reach the following conclusions:

- (a) Japan, by maintaining the phytosanitary measure at issue, violates Article 2.2 of the SPS Agreement not to maintain phytosanitary measures "without sufficient scientific evidence, except as provided for in paragraph 7 of Article 5";
- (b) Japan, by reaching, in the 2004 PRA, conclusions that are not supported by the scientific evidence relied upon by Japan is maintaining a phytosanitary measure that is not based on an assessment, as appropriate to the circumstances, of the risk to plant life or health, contrary to Article 5.1 of the SPS Agreement.
- (c) Japan breaches Article 5.6 of the SPS Agreement, to the extent that the measure at issue is more trade-restrictive than required to achieve Japan's appropriate level of phytosanitary protection, taking into account technical and economic feasibility.

9.2 Article 3.8 of the DSU provides that "[i]n cases where there is an infringement of the obligations assumed under a covered agreement [including the SPS Agreement], the action is considered prima facie to constitute a case of nullification or impairment". We note that Japan failed to rebut this presumption. We conclude that, to the extent Japan has acted inconsistently with the SPS Agreement, it has nullified or impaired the benefits accruing to the United States under the SPS Agreement.

9.3 We recommend that the Dispute Settlement Body request Japan to bring the phytosanitary measure in dispute into conformity with its obligations under the SPS Agreement.