USDA

**United States Department of Agriculture**

Animal and Plant Health Inspection Service

4700 River Road
Riverdale, MD
20737

September 5, 2008

Ms. Louise Van Meurs
General Manager
Plant Biosecurity, Biosecurity Australia
Department of Agriculture, Fisheries and Forestry
Canberra Australia

Dear Ms. Van Meurs:

We appreciate the opportunity to offer our comments on Biosecurity Australia's (BA's) July 2008 issues paper for the Import Risk Analysis (IRA) of fresh U.S. apple fruit exported to Australia. Our comments focus on the scope of the analysis, the relevance of BA's existing policy for fire blight and European canker to access of U.S. apple fruit, BA's review of Pacific Northwest (PNW) apple production practices, and the pest list.

**SCOPE OF THE ANALYSIS**

BA states that its Import Risk Analysis (IRA) initiated on March 17, 2008, applies to the importation into Australia of commercially produced fresh apple fruit, free of trash, from the PNW States of Idaho, Oregon, and Washington imported. The IRA in progress pertains to "all commercial apple-producing counties and all commercially produced apple cultivars from the PNW" (Page 7, July 2008 issues paper). Together, the three States account for close to 60 percent of U.S. apple production.

We emphasize that our market access request is for apples from the three Pacific Northwest States, not for apples from other apple growing regions of the United States. When reviewing the pest complex for the three Pacific Northwest States, we encourage BA to take into consideration the economics and regulations governing movement of apples from Eastern apple production areas to Western apple production areas. Few, if any, producers in the Eastern U.S. apple producing States ship fresh apples to the PNW States due to high transportation costs, abundant PNW apple production, and restrictions on movement of apple fruit for certain pests such as Plum curculio (*Conotrachelus nenuphar*). Fresh apple fruit from States quarantined for Plum curculio must be subjected either to controlled atmosphere storage or cold treated to enter the PNW States, where this pest is not known to occur. Fresh apples from the U.S. States east of and including North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, and Box Elder County, Utah, are subject to the restrictions.

Additionally, the three PNW States require certification of all nursery stock and impose stricter requirements on propagative materials from States quarantined for Japanese beetle. Eastern apple producing States are included in these quarantines.

**BA'S EXISTING POLICY FOR FIRE BLIGHT AND EUROPEAN CANKER**

In the July 2008 issues paper, BA indicates that it will take into account, where relevant, its existing policy for Fuji apples from Japan and apples from New Zealand. The United States believes that BA's existing measures for New Zealand apples with regard to fire blight and European canker should not be applied for U.S. apples because these measures are maintained without sufficient scientific evidence.

As you are aware, New Zealand has brought a World Trade Organization dispute against Australia pertaining to Australia's IRA for New Zealand apples. The United States is participating in that dispute as a third party and agrees with New Zealand that Australia's measures for fire blight and European canker are maintained without sufficient scientific evidence. In the specific comments enclosed to this letter, we have excerpted key points from our third party submission in that dispute that more fully explain why we believe that Australia's measures for apples from New Zealand are maintained without sufficient scientific evidence. The full text of the submission entitled "Australia–Measures Affecting the Importation of Apples from New Zealand (WT/DS367): Third Party Submission of the United States of America," can be found at: http://www.ustr.gov/Trade_Agreements/Monitoring_Enforcement/Dispute_Settlement/WTO/Dispute_Settlement_Index_-_Pending.html.

**FIRE BLIGHT**

In its July 2008 issues paper, BA observes that fire blight is widespread in the United States, and outbreaks of the disease have occurred every season in Washington apple orchards since 1991 (Page 12, July 2008 issues paper). While fire blight does occur in the United States, including the PNW States, there is no scientific evidence that mature, symptomless apple fruit, the commodity to be exported to Australia, have ever been involved in the spread of fire blight disease. In its IRA for New Zealand apples, Australia provided no new evidence that mature, symptomless apples transmit fire blight bacteria or are responsible for new outbreaks of the disease.

The scientific evidence indicates that *Erwinia amylovora*, the bacterium causing fire blight, is not associated internally with mature, symptomless apple fruit and is only rarely associated externally with mature, symptomless apple fruit, even when harvested from blighted trees and orchards. Even if a mature, symptomless apple were externally contaminated with *Erwinia amylovora*, such bacteria are unlikely to survive normal commercial handling, storage, and transport of fruit, and there is no dispersal mechanism or vector to allow movement of such bacteria from the fruit to a suitable host. Hence, the pathway of transmission of fire blight bacteria from association of the bacteria with fruit to bacterial survival of handling, storage, and transport to vectoring of bacteria to a suitable host is never completed. This has been demonstrated repeatedly in scientific studies that were specifically designed to determine if *E. amylovora* on contaminated fruit would be vectored to susceptible hosts and subsequently initiate fire blight disease.

**FIRE BLIGHT (CON'T)**

We also believe that Australia's existing requirements for fire blight as applied to New Zealand apples are problematic as they are maintained without sufficient scientific evidence. Under its existing policy for apples from New Zealand, Australia requires that apples be sourced from areas free of fire blight symptoms, orchard inspections, the suspension of an orchard/block if visual symptoms of fire blight are detected, and chlorine disinfection of apples in the packinghouse.

Lastly, BA observes that fire blight outbreaks occur sporadically, but, when they do occur, they incur significant losses. We noted in our March 31, 2006, comments on the draft IRA for New Zealand apples that the estimations of establishment and spread of fire blight had been overestimated. If we were to apply the partial probabilities presented in BA's IRA for the establishment and spread of fire blight in apple orchards (a distribution of 0.7, 1) to the United States, fire blight should occur in 70-100 percent of U.S. apple orchards every year. Such an estimate is not supported by current or historical levels of fire blight disease incidence in the production areas of the Pacific Northwest. BA hypothesizes that, since all Australian apple cultivars and climates are conducive to fire blight, 70-100 percent of all Australian orchards will be infected by the disease. This greatly overestimates the occurrence of fire blight within the United States, and especially so within the PNW States. Similarly, we believe that BA overestimated the probability of establishment and spread of the disease for nursery plants, household and garden plants, and wild and amenity plants.

**EUROPEAN CANKER**

We believe that Australia's measures for European canker are maintained without sufficient scientific evidence. It is our view that three key factors are necessary for the infection of apple fruit with European canker: conducive climatic conditions, the presence of a susceptible host, and a minimum concentration of inoculum. Favorable occurrence of all three of these factors is necessary for infection of apple fruit to occur.

European canker has not been reported to occur in the major apple producing regions of central Washington State. We believe that the absence of the disease in these areas is because the climate in these areas is not suitable to the development of the disease. We have elaborated fully on these conditions in "Australia–Measures Affecting the Importation of Apples from New Zealand (WT/DS367): Third Party Submission of the United States of America," as excerpted in the enclosure to this letter.

As for whether the European canker pathogen could be transmitted to a host orchard, apple fruit has never been reported to be an important source of inoculum for the spread of European canker. Individual apple fruits that have been discarded on the ground will most likely either decompose or be consumed by animals before any latent infection that might exist would have a chance to cause decay, or before the fungus can sporulate. In the unlikely event of an apple fruit producing spores, these spores would be unlikely to

**EUROPEAN CANKER (CON'T)**

cause an infection of European canker in trees because lengthy wet periods, as well as high levels of inoculum, are needed.

Furthermore, in the unlikely event that a sporulating apple is discarded on the ground, it would be a poor source of inoculum for trees in an apple orchard because conidia are dependent on splashing rain drops for dissemination, and the concentration of spores a few meters from the sporulating fruit will likely be well below the threshold required for infection. In addition, spores that are dispersed by air will be subject to even greater dilution than spores dispersed by rain. We also note that there is no scientific evidence to support BA's hypothesis that birds and insects may be a possible means for the European canker pathogen to be transmitted from a sporulating apple on the orchard floor to a host tree.

BA itself has acknowledged that apple fruit are unlikely to spread European canker in its IRA for apples from New Zealand. The IRA states that "there is no evidence in the literature that indicates that long-distance spread of disease is due to movement of fruit...." ( p. 142). Recently, a team of Australian scientists observed that more research is required to determine the role of latent infection of Neonectria galligena as a possible pathway into Australia ("Predicting the potential distribution of Neonectria galligena (European canker) in Australia using the models CLIMATE and CLIMEX, poster presented at the 9th International Congress of Plant Pathology, August 24-29, 2008, Torino, Italy).

**OVERVIEW OF CULTIVATION AND PROCESSING PRACTICES FOR PNW APPLES**

We would like to make three major observations about BA's review of orchard systems and irrigation. First, we observe that apple orchards are replaced more frequently than the 30 to 35 years cited by BA. Discussions with industry experts in Washington State indicate that orchards are replanted more in the range of 15 to 25 years. The National Agricultural Statistics Service's Washington Fruit Survey reported that 86 percent of apple trees in Washington State were planted since 1986. Forty-nine percent were planted since 1996 (in the past 12 years). This last figure has likely grown since the most recent survey was conducted in January 2006. Since January 2006, it is likely that more of the older trees in the region have been replaced.

Second, as BA correctly notes, trees in the older orchards of the Red and Golden Delicious varieties are larger, making pruning, spraying and picking difficult. While this is true, we believe that BA's translation of the statistic from the 2001 Washington State Crop Profile may have increased the differences in orchard densities. The 2001 publication cites an orchard density of 110 trees per acre. This converts to about 272, rather than 40, trees per hectare. More recently, the National Agricultural Statistics Service's Washington Fruit Survey reported an average acreage density of 301 trees per acre for all Red Delicious apple acreage (743 trees per hectare) and of 236 trees per acre (583 trees per hectare) for trees planted before 1986 (more than 22 years of age). We are enclosing the 2006 Washington, Oregon, and Idaho Fruit Surveys for your information.

**OVERVIEW OF CULTIVATION AND PROCESSING PRACTICES FOR PNW APPLES (CON'T)**

Lastly, we note BA's observations about PNW irrigation methods. While some growers continue to use the overhead or high pressure systems for orchard cooling and occasionally for frost control, their use has declined markedly in the past several years as growers seek ways to enhance irrigation efficiency, lower the costs of irrigation, and more efficiently apply fertilizers and pesticides. The increasing use of drip irrigation or micro-sprinklers also reduces the likelihood of disease spread encountered with the overhead irrigation systems.

**PEST LIST**

We observe that BA conducted extensive research to expand the pest list well beyond the list of pests associated with apples from the three PNW States that we submitted in 2007. We find that the list is comprehensive and have no new pests to add to the list.

We understand that BA's next step is to scrutinize this pest list to establish the quarantine status of the listed pests and their association with apple fruit from the three PNW States from which we are seeking access. We look forward to commenting on a revised list once BA has established the quarantine status of the pests.

We note that some of the listed pests are not known to occur in the three PNW States and/or are under quarantines. The following pests are subject to restrictions on the movement of apple fruit or propagative materials under Federal and/or State quarantines:

- **Plum curculio (*Conotrachelus nenuphar*)**—is not known to occur in the three PNW States and movement of fresh apples is restricted under the Washington Agriculture Code Title 16, Chapter 470, Oregon State Regulation 603-52-0030, and Idaho State Regulation 02.06.38.
- **Mediterranean fruit fly (*Ceratitis capitata*), Mexican fruit fly (*Anastrepha ludens*), and Oriental fruit fly (*Bactrocera dorsalis*)** are not known to occur in the three PNW States and movement of host materials, including Malus, is regulated under Federal Regulations 301.78, 301.64, and 301.93, respectively.
- **Japanese beetle (*Popillia japonica*)** is not known to occur in the three PNW States. Nursery stock, soil, bulbs and other propagative material are prohibited or restricted entry to the three PNW States under State regulations (Idaho Regulation 02.06.24; Oregon Regulation 603-52-0127; and Washington Agriculture Code Title 16, Chapter 470.
- **Apple maggot (*Rhagoletis pomonella*)**—The States of Idaho, Oregon, and Washington also regulate entry of fresh apples from States in which apple maggot is known to occur (Idaho regulation 02.06.08; Oregon regulation 603-052-0121; and Washington Agriculture Code Title 16, Chapter 470) and all three states operate interior quarantines controlling the movement of apples from Apple maggot quarantine areas within those three States.

- Cherry fruit worm (*Grapholita packardi*)—has never been recorded as a pest of apples in the PNW apple production area based on historical records from Washington State University and the Washington State Department of Agriculture. Additionally, general surveillance conducted as part of common industry production practices has not detected this pest in the PNW apple production areas.

**TIMETABLE**

We note that this IRA will be conducted under an expanded process of 30 months from its date of announcement of March 17, 2008. We hope that the work already completed on this analysis will allow you to complete the IRA without undue delay. As noted in the issues paper, we first made a formal request for access in 1999. However, access to Australia for PNW apples figured prominently among the discussion topics in Australia – U.S. bilateral plant health meetings throughout the 1990's.

We appreciate your cooperation on this issue.

Sincerely,

for

Craig T. Fedchock
Assistant Deputy Administrator
Phytosanitary Issues Management
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Enclosures