

25th Biosecurity Emerging Risks System Report

ERS update: 22 August to 20 November 2023

Animal and Plant Health Directorate



Executive Summary

In the three months between 22/08/2023 and 20/11/2023, one pest was identified by the MPI Emerging Risks System that required changes to import health standards.




Over this period, we received 188 new alerts about potential emerging risks, including 10 alerts relating to high priority organisms (HPOs). The majority of these were able to be closed quickly because the information was not new, did not represent an increased biosecurity risk or the risk would be mitigated by existing controls.

At the end of the reporting period, risk assessments or evaluations have been completed for 47 alerts, and one alert related to high priority organisms was in progress. The completed assessments in this reporting period resulted in one change to standards and six pests being subject to ongoing active monitoring.

Active monitoring is initiated when risk analysts and managers have determined that current alerts do not represent an increase to biosecurity risk by these pests at this time, but there is sufficient information to suggest the pest may continue to emerge as a risk. We actively monitor these causative agents for changes in risk factors (for example, new country distributions, new hosts or new pathways) using periodic searches of databases and other internet sources, in addition to continued monitoring through the Emerging Risks System.

These results confirm both the resilience of our biosecurity standards to mitigate most new and emerging risks without further intervention, and the value of the emerging risk system to proactively identify adjustments or interventions needed in the small number of cases where standards will not effectively mitigate emerging risks.

47 risk assessments and risk management evaluations were completed

 0 were related to animal health	 0 were related to aquatic health	 47 were related to plant health
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Outcome of new alerts for HPOs

HPO	No. alerts	Resolved (no risk/managed)	Pending
<i>Bactrocera dorsalis</i> (Oriental fruit fly)	1	1	-
<i>Bactrocera tryoni</i> (Queensland fruit fly)	1	1	-
<i>Ceratitis capitata</i> (Mediterranean fruit fly)	1	1	-
<i>Halyomorpha halys</i> (brown marmorated stink bug)	1	1	-
<i>Lycorma delicatula</i> (spotted lanternfly)	1	1	-
Potato spindle tuber viroid (PSTVd)	1	1	-
<i>Tetranychus evansi</i> (red spider mite)	1	1	-
Tomato apical stunt viroid (TASVd)	1	1	-
<i>Xylella fastidiosa</i> (Pierce's disease of grapevines)	2	1	1 management evaluation

Alert resulting in changes to import health standards

Causative agent	Pathway/IHS amended
<i>Xylella fastidiosa</i> (Pierce's disease of grapevines)	Nursery Stock

Organisms for which we initiated monitor for change activities

Causative agent	Causative agent
<i>Cytospora mali</i>	<i>Cytospora azerbaijanica</i>
<i>Diaporthe actinidiicola</i>	<i>Pseudomonas allivornas</i>
<i>Pseudocercospora pini-densifliae</i> (brown needle disease)	Mungbean yellow mosaic virus (MYMV)

25th Biosecurity Emerging Risks System Report

The Ministry of Primary Industry (MPI) Biosecurity Emerging Risks System (ERS) is designed to proactively identify and manage emerging risks to New Zealand's plant, animal and aquatic biosecurity. It is a centralised system that takes a systematic intelligence-led approach to help MPI and industry prioritise and coordinate risk-based interventions for new and emerging biosecurity risks.

An important part of the system is communicating emerging risk information to stakeholders, so they:

- have an opportunity to consider and take appropriate action within their own sphere of influence and
- can see what happened with information (alerts) they sent into the system.

This, the 25th Biosecurity emerging risks system report, provides information about alerts progressed through the system between 22 August and 20 November 2023.

Overview of Biosecurity Emerging Risks System

The ERS is an important component of New Zealand's biosecurity system. The biosecurity system is designed to prevent or manage risks of harm that pests and diseases may cause to our economy, environment, human health and a range of social and cultural values. It does this by:

- stopping pests and diseases that could cause significant harm before they arrive and
- dealing with them if they do enter the country.

Part of stopping pests and diseases before they arrive is identifying potential future (emerging) risks and assessing whether our existing biosecurity risk management approaches will need to be adjusted to keep them out. Regular reporting from across MPI and external stakeholders provides the ERS team information to identify key emerging risks.

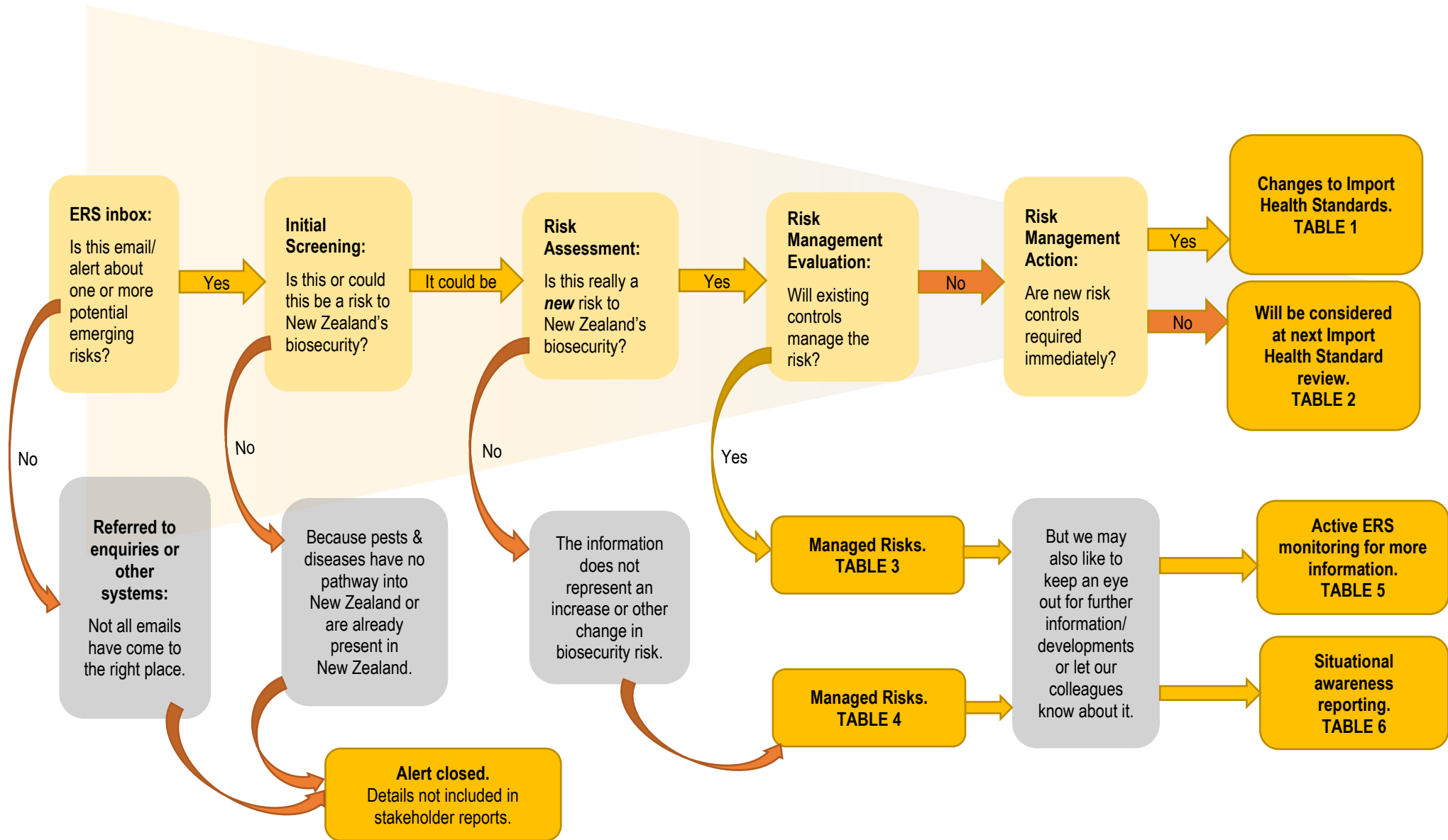
Every New Zealander can engage with the ERS and be biosecurity conscious. We encourage anyone with new information about a potential new or changing pest or disease risk that could impact primary industries or New Zealand's biosecurity system to email the details to emergingrisks@mpi.govt.nz.

MPI's Biosecurity Emerging Risks System provides a central entry point for emerging risk information from staff, stakeholders and other sources to be received, properly assessed and have appropriate action taken.

What happens when information is sent to the emerging risks system?

New information is received and processed as "Alerts". The ERS team reviews each alert. We mainly focus on identifying significant new pests and changes in distribution, virulence, or outbreaks of high priority organisms of biosecurity concern to New Zealand. However, all new information is considered for assessment. We take risk management action if the information signals an increased risk to New Zealand biosecurity.

The following diagram provides more information about what can happen with each alert.



Overview of ERS activities (Reporting period 22/08/22 – 20/11/2023)

In the reporting period we assessed **198** new alerts and **16 alerts progressed beyond the initial screening stage**

0 were related to Aquatic Health, 1 was related to Animal Health and 15 were related to Plant Health

In the reporting period, **1 Import Health Standard (IHS)** was amended

0 were related to Aquatic Health, 0 were related to Animal Health and 1 were related to Plant Health

Information from **5 alerts** was logged for review when the relevant IHS schedule is updated

0 were related to Aquatic Health, 0 were related to Animal Health and 5 were related to Plant Health

16 alerts were evaluated by risk managers and were considered managed by existing Standards

0 were related to Aquatic Health, 0 were related to Animal Health and 16 were related to Plant Health

18 alerts were closed following risk assessment because they did not represent an increase in biosecurity risk

0 were related to Aquatic Health, 0 were related to Animal Health and 18 were related to Plant Health

6 alerts are being actively monitored for further information

0 were related to Aquatic Health, 0 were related to Animal Health and 6 were related to Plant Health

1 alert was sent to border staff for their information

0 were related to Aquatic Health, 0 were related to Animal Health and 1 was related to Plant Health

8 alerts had a risk assessment and are pending risk management evaluation

0 were related to Aquatic Health, 0 were related to Animal Health and 8 are related to Plant Health

Summary of actions and outcomes of emerging risk alerts

Table 1: Alerts resulting in a change to an import health standard (IHS)

Risk managers determined that risk management action was required to manage the one emerging risk during the reporting period. Usually, we amend a schedule of an import health standard to manage the changed risk.





Alert ID	Alert details	Significance	Summary	Field of Alert
10299-1	New host association: The European Food Safety Authority (EFSA) has published an updated host list for the bacterium <i>Xylella fastidiosa</i> with fifteen new host species listed across five genera. Of these, garden thyme (<i>Thymus vulgaris</i>) is reported as a host for the first time.	<i>Xylella fastidiosa</i> causes severe damage in several major crops including citrus and grapevine. <i>Xylella fastidiosa</i> has hundreds of host plant species, many of which, including garden thyme, are present in New Zealand and may be imported as nursery stock.	Risk management evaluation concluded that an urgent amendment of the <i>Thymus</i> import requirements was needed to manage the risk of the newly described association between garden thyme and <i>X. fastidiosa</i> . The import health standard was amended.	

Table 2: Alerts noted for future review of import health standards (IHS)

For these alerts, risk managers determined that the change in risk should be considered at the next IHS review. We did not believe these alerts required immediate action. The rationale for each decision is reported in the alert summaries.

Alert ID	Alert details	Significance	Summary	Field of Alert
6049-1	Newly described organism/taxon: The bacterium <i>Pectobacterium peruvienne</i> (potato blackleg) was isolated from potato (<i>Solanum tuberosum</i>) in Peru and from alpine rivers in France.	<i>Pectobacterium peruvienne</i> is not present in New Zealand and causes blackleg disease on potatoes. Potato plants can be imported from Peru and France on the nursery stock pathway.	Risk management evaluation found that the risk on the potato nursery stock pathway does not require immediate action because <i>P. peruvienne</i> is managed by the measures in place for <i>P. betavasculorum</i> and <i>P. polaris</i> on the pathway. However, risk managers recommend that this alert should be logged for consideration at the next review of the requirements for potato in the nursery stock import health standard.	
9786-1	New research/new awareness: Due to a taxonomic change, the powdery mildews <i>Podosphaera cerasi</i> and <i>Po. prunicola</i> are considered separate from <i>Po. clandestina</i> and need to be evaluated against the measures in the <i>Prunus</i> Nursery Stock IHS and the ONZPR listings for cherry powdery mildew (<i>Po. clandestina</i>).	<i>Podosphaera cerasi</i> causes powdery mildew on cherries (<i>Prunus avium</i> , <i>P. cerasii</i>). <i>Prunus</i> spp. may be imported as nursery stock from all countries.	Risk management evaluation found that the risk on the <i>Prunus avium</i> and <i>P. cerasus</i> nursery stock pathway does not require immediate action because current measures for <i>P. clandestina</i> are likely sufficient to manage the risk of this organism. However, risk managers recommend that this alert should be logged for consideration to be a regulated pest on the IHS and/or ONZPR.	
9787-1	New research/new awareness: Due to a taxonomic change, the powdery mildews <i>Podosphaera cerasi</i> and <i>Po. prunicola</i> are considered separate from <i>Po. clandestina</i> and need to be evaluated against the measures in the <i>Prunus</i> Nursery Stock IHS and the ONZPR listings for cherry powdery mildew (<i>Po. clandestina</i>).	<i>Podosphaera prunicola</i> causes powdery mildew on cherries and peaches. There are several <i>Prunus</i> spp. present in NZ, and they may be imported as nursery stock from all countries.	Risk management evaluation found that the risk on the <i>Prunus avium</i> and <i>P. cerasus</i> nursery stock pathway does not require immediate action because current measures for <i>P. clandestina</i> are likely sufficient to manage the risk of this organism. However, risk managers recommend that this alert should be logged for consideration to be a regulated pest on the IHS and/or ONZPR.	

















Alert ID	Alert details	Significance	Summary	Field of Alert
10362-1	New research/new awareness: A USDA pest risk assessment for sweet orange (<i>Citrus sinensis</i>) and mandarin (<i>C. reticulata</i>) fruit for consumption from Egypt identifies the Ethiopian fruit fly (<i>Dacus ciliatus</i>) as a potential risk on the pathway.	The Ethiopian fruit fly is not present in New Zealand and causes damage to cucurbits and numerous other species of horticultural importance. Of the countries where the fly is known to occur, citrus fresh produce may only be imported from Egypt.	Risk management evaluation found that the risk on the mandarin or orange pathways from Egypt does not require immediate action because there is insufficient evidence for host association of <i>D. ciliatus</i> on the mandarin or orange pathway. However, risk managers recommend that this alert should be logged for consideration at the next review of the requirements in the import health standards for mandarin and oranges for human consumption.	
10455-1	New research/new awareness: The fungus <i>Phellinus noxius</i> causes asymptomatic infection in the dwarf voodoo lily (<i>Typhonium blumei</i>), Buffalo grass (<i>Paspalum conjugatum</i>), knot grass (<i>Paspalum distichum</i>), basket grass (<i>Oplismenus compositus</i>), blackjack (<i>Bidens pilosa</i>), southern crabgrass (<i>Digitaria ciliaris</i>), and manila grass (<i>Zoysia matrella</i>) in Taiwan.	<i>Phellinus noxius</i> is not present in New Zealand. It causes death of trees and loss of yield in camellia, persimmon, eucalyptus, magnolia, oleander, avocado, Taiwan cherry, plum, peach, pear, rhododendron and grape, among other host species. Of the newly reported asymptomatic hosts, blackjack can be imported from all countries as nursery stock.	Risk management evaluation found that the risk of <i>Phellinus noxius</i> on blackjack from Taiwan does not require immediate action because there is low demand for this pathway. There is no record of blackjack ever being imported into New Zealand. <i>Bidens</i> spp. nursery stock imports from all countries would require PEQ and an import permit. The permit assessment process includes a check of the emerging risks system. However, risk managers recommend that this alert should be logged for consideration at the next review of the requirements in the nursery stock import health standard.	

Table 3: Alerts closed because existing measures are appropriate to manage risk

These alerts were screened, passed to risk analysts for a more in-depth risk assessment and then passed to risk managers, who determined that the risk was effectively managed with existing measures.

Alert ID	Alert details	Significance	Summary	Field of Alert
3501-1	New country post border detection/incursion: <i>Bactrocera dorsalis</i> (Oriental fruit fly) detected in Redding city, California.	Oriental fruit fly is not present in New Zealand and causes damage to fruit such as apple, pear and grapes. Host material may be imported as fresh produce from California.	Risk management evaluation determined that the risk associated with Oriental fruit fly on the fresh fruit pathways from the USA is managed by existing measures. The USA has specific pre-export measures in place to effectively manage the risk of Oriental fruit fly on fresh produce from the USA.	
5043-1	New research/new awareness: <i>Dendroctonus valens</i> (red turpentine beetle) has been added to the EPPO alert list.	The red turpentine beetle is not present in New Zealand and causes damage to pine, spruce, and larch species. Host material may be imported as forest products and wood packaging.	Risk management evaluation concluded that the risk of red turpentine beetle is managed by existing measures. The beetle feeds on the inner bark of its hosts. As forest products and wood packaging must be debarked, this in combination with other treatments for wood boring insects is likely to manage the risk of the pest on the forest products pathway.	
5601-1	Change in distribution: The Animal and Plant Health Inspection Service (APHIS) is expanding the area quarantined for citrus canker (<i>Xanthomonas</i> spp.) in Texas to include portions of Brazoria and Harris counties in and near Pearland and additional portions of Fort Bend and Harris counties in and near Richmond to prevent the spread of the disease.	<i>Xanthomonas</i> citrus canker is not present in New Zealand. <i>Citrus</i> spp. may be imported from the USA on the seeds for sowing, nursery stock and fresh produce pathways.	Risk management evaluation determined that the risks associated with <i>Xanthomonas</i> spp. on the fresh citrus from USA pathways are managed by existing measures.	
5612-1	New research/new awareness: Alert 5601 is about the expanding of quarantined area for citrus canker (<i>Xanthomonas</i> spp.) in Texas. The Fresh Produce IHS, has no specific measure for the disease on lime from the USA.	<i>Xanthomonas</i> citrus canker is not present in New Zealand. Lime may be imported from the USA as fresh produce.	Risk management evaluation determined that the risks associated with <i>Xanthomonas</i> spp. on the fresh lime from USA pathways are managed by existing measures. The disease causes distinctive lesions on fruit which are likely to be visible and detected during crop monitoring, harvest, and grading/sorting.	

Alert ID	Alert details	Significance	Summary	Field of Alert
6504-1	New/change in pathway: Eggplant (<i>Solanum melongena</i>) and beans (<i>Phaseolus</i> spp.) from Fiji and sweet corn (<i>Zea mays</i>), beans (<i>Phaseolus</i> spp.) and capsicum (<i>Capsicum annuum</i>) from Australia may require risk management evaluation for the red spider mite <i>Tetranychus evansii</i> .	The red spider mite is a pest of multiple crops including tomato, eggplant, capsicum, beans and sweetcorn. The mite was detected in New Zealand in 2020.	Risk management evaluation determined that the risk associated with <i>T. evansi</i> on produce from Australia pathway does not require management because the mite is established in New Zealand.	
7582-1	New host association(s): Updated list of host plants for the tomato leafminer moth (<i>Tuta absoluta</i>) from Romania.	The tomato leafminer moth is not present in New Zealand. It is highly destructive, feeding on hosts including tomato, potato, capsicum, and aubergine. Infestations can lead to yield loss and fruit rot. Of the moth's newly described hosts capsicum may be imported as fresh produce from the Netherlands.	Risk management evaluation determined that the risk associated with tomato leafminer on the capsicum pathway from Netherland is managed by existing measures.	
7621-1	New country post border detection/incursion: Outbreaks of Queensland fruit fly (<i>Bactrocera tryoni</i>) have been declared in the Riverland (South Australia) and Coolbellup regions of Australia.	South Australia is a pest free area from <i>Bactrocera tryoni</i> . The fly has potential to cause damage to multiple hosts in New Zealand. Queensland fruit fly hosts may be imported on fresh produce pathways.	Risk management evaluation determined that the risk associated with <i>B. tryoni</i> on the avocado, capsicum, citrus, grape, strawberry and tomato from Australia pathways is managed by existing equivalent measures.	
8650-1	New host association/Change in distribution: First report of the fungus <i>Diaporthe siamensis</i> infecting <i>Citrus sinensis</i> (sweet orange) in China.	<i>Diaporthe siamensis</i> is not present in New Zealand. The fungus causes fruit rot in orange. Sweet orange may be imported from China on the nursery stock pathway.	Risk management evaluation determined that the risk associated with <i>Diaporthe siamensis</i> on the sweet orange nursery stock pathway is managed by existing standards.	
8715-1	Change in distribution: <i>Spodoptera frugiperda</i> (Fall armyworm) has established in Zimbabwe.	Fall armyworm has been detected in New Zealand and is suspected to have arrived on the wind from Australia. In warmer countries, it is a serious pest of agricultural crops and is known to feed on over 100 species including maize, rice and sorghum.	Risk management evaluation determined that the risk associated with fall armyworm on the pea, bean, and sweetcorn pathways from Zimbabwe is managed by existing measures. Fall armyworm is now present in New Zealand and MPI cannot justify measures on this pest.	
8981-1	Change in distribution: First report of beech leaf disease caused by the nematode <i>Litylenchus crenatae mccannii</i> in New Jersey, West Virginia and Virginia (USA).	<i>Litylenchus crenatae mccannii</i> is not present in New Zealand and causes beech leaf disease in beech trees (<i>Fagus</i> spp.). Beech can be imported from the USA and Canada on the nursery stock pathway.	Risk management evaluation found that the risk on the beech nursery stock pathway is managed by existing standards which require generic treatments for nematodes for whole plants and cuttings.	

Alert ID	Alert details	Significance	Summary	Field of Alert
9596-3	New country port border detection/incursion: Western Australia Department of Primary Industries and Regional Development (DPIRD) is working with growers to contain the spread of <i>Potato spindle tuber viroid</i> (PSTVd), following confirmation of 2 recent detections in tomato and capsicum crops north of Perth.	<i>Potato spindle tuber viroid</i> is not present in New Zealand. The viroid causes disease and production losses in multiple hosts. Among its known hosts, tomato and capsicum may be imported from Australia via the fresh produce pathway	Risk management evaluation determined that the risk associated with <i>Potato spindle tuber viroid</i> on fresh capsicum and tomato from Australia is managed by existing standards.	
9596-4	New country port border detection/incursion: Western Australia Department of Primary Industries and Regional Development (DPIRD) is working with growers to contain the spread of <i>Potato spindle tuber viroid</i> (PSTVd), following confirmation of 2 recent detections in <i>tomato and capsicum</i> crops north of Perth.	<i>Potato spindle tuber viroid</i> is not present in New Zealand. The viroid causes disease and production losses in multiple hosts. Among its hosts avocado may be imported from Australia via the fresh produce pathway	Risk management evaluation determined that the risk associated with <i>Potato spindle tuber viroid</i> on fresh avocado from Australia is managed by existing standards.	
9788-1	New research/new awareness: Due to a taxonomic change, there is a gap in the <i>Prunus</i> Nursery Stock IHS and ONZPR listings for cherry powdery mildew (<i>Podosphaera cerasi</i> , <i>Po. prunicola</i> & <i>Po. clandestina</i>).	<i>Podosphaera clandestina</i> causes powdery mildew on cherry. There are several <i>Prunus</i> species present in NZ, and they may be imported as nursery stock from all countries.	Risk management evaluation determined that powdery mildew <i>Podosphaera clandestina</i> is present in New Zealand and has been logged for de-regulation.	
10272-1	New research/new awareness: Evidence has been reported of seed and pollen transmission of <i>Tomato leaf curl New Delhi virus</i> (ToLCNDV) in cucumbers (<i>Cucumis sativus</i>) and tomatoes (<i>Solanum lycopersicum</i>).	<i>Tomato leaf curl New Delhi virus</i> causes stunting and yellowing of its hosts leaves, which in turn affects plant health and productivity in tomato, capsicum and cumber. The virus is not known to be present in New Zealand and its hosts may be imported on the seeds for sowing pathway.	This pest can be considered managed by existing measures because it is not conclusive whether ToLCNDV is seed transmitted in cucumber. The source of this alert did not demonstrate vertical transmission of the virus in surface sterilised seeds, meaning infection could have been caused via contaminated parental tissue rather than true seed transmission. Furthermore, it did not demonstrate seed transmission under natural conditions. Entry of seed-borne ToLCNDV into NZ on imported cucumber seeds for sowing is likely to be managed by commercial production systems and the IHS requirement for the seeds to be clean and free from flesh.	
















Alert ID	Alert details	Significance	Summary	Field of Alert
10274-1	New research/new awareness: Evidence has been reported of seed and pollen transmission of <i>Tomato yellow leaf curl Thailand virus</i> (TYLCTHV) in tomatoes (<i>Solanum lycopersicum</i>).	<i>Tomato yellow leaf curl Thailand virus</i> causes mosaic and leaf curling disease in tomato (<i>Solanum lycopersicum</i>). TYLCTHV does not occur in New Zealand and it is known to infect peppers as well as tomato. Both tomato and pepper seeds may be imported from all countries on the seeds for sowing pathway.	Risk management evaluation found that the risk on the tomato and capsicum seeds for sowing pathway does not require immediate action because the evidence for seed transmissibility of the pest on tomato and capsicum seeds for sowing does not meet the ISPM 38 guidelines to justify measures currently. Commercial production systems for the tomato and capsicum seeds for sowing pathway are likely to reduce the risk to an acceptable level.	
10556-1	New research/new awareness: Species of the bacterial genus <i>Dickeya</i> are no longer considered to be present in New Zealand and are now regulated pests in ONZPR.	<i>Dickeya</i> spp. are no longer considered to be present in New Zealand. These bacteria cause soft rot symptoms on a wide range of hosts including potato (<i>Solanum tuberosum</i>), kumara (<i>Ipomoea batatas</i>), <i>Dahlia</i> , and carnations (<i>Dianthus</i>). Many hosts can be imported on the nursery stock pathway.	There is currently a project underway to amend the nursery stock import health standard to put measures in place to mitigate the risks posed by <i>Dickeya</i> spp. on their hosts. Risk management evaluation found that the risk on the multiple nursery stock pathways of this alert does not require immediate action because most hosts express disease symptoms when infected with <i>Dickeya</i> .	





Table 4: Alerts closed because they do not represent a significant change or increase in risk to New Zealand biosecurity

These alerts were screened, passed to risk analysts for a more in-depth risk assessment and then closed because they do not represent a change or increase in biosecurity risk. NB: Some alerts closed at this stage generate active monitoring and/or situational awareness for border staff and are recorded in tables 5 and 6 respectively.

Alert ID	Alert details	Significance	Summary	Field of Alert
10068	Change in distribution: The fungus <i>Phacidiopycnis washingtonensis</i> (speck rot) has been reported on <i>Malus</i> sp. in Europe.	<i>P. washingtonensis</i> is not present in New Zealand and causes speck rot, black necrosis of fruit, stem canker, and twig dieback on apple (<i>Malus</i> spp.). Apple can be imported as nursery stock from Germany.	Risk assessment determined that the new distribution of <i>P. washingtonensis</i> in Europe does not represent a potential risk to New Zealand biosecurity on the nursery stock pathway. Apple can be imported as nursery stock from Germany, but based on available evidence, symptoms are expected to show within the 6-month PEQ period.	
10094	New host association: <i>Apple fruit crinkle viroid</i> (AFCVd) is reported for the first time in common persimmon (<i>Diospyros virginiana</i>) in the USA.	<i>Apple fruit crinkle viroid</i> is not present in New Zealand. It causes fruit flesh necrosis and bark blisters in apple, severe stunting in hops, and may cause chlorosis and necrosis in persimmon. Persimmon may be imported from the USA and Japan on the nursery stock and seeds for sowing pathways.	Risk assessment determined that the new host association of AFCVd on persimmon does not represent a risk to New Zealand biosecurity on the nursery stock or seeds for sowing pathways. We found no evidence that AFCVd can infect persimmon asymptotically or is transmitted via seed. This means that infected persimmon plants would likely be detected in PEQ.	
10157	New host association: First report of <i>Fusarium curvatum</i> , a fungus in the <i>Fusarium oxysporum</i> species complex, infecting the orchid <i>Dendrobium officinale</i> in China.	<i>Fusarium curvatum</i> is not present in New Zealand. It causes dieback in a range of ornamental hosts and sorghum (<i>Sorghum</i> sp.). <i>Dendrobium officinale</i> can be imported on the nursery stock pathway.	Risk assessment determined that the new host association between <i>Fusarium curvatum</i> and <i>Dendrobium officinale</i> does not represent a risk to New Zealand biosecurity on the nursery stock pathway because the fungus is soil borne and the new orchid host may only be imported in soilless media and not from countries where the fungus is known to occur.	
10435	Newly described organism: The fungus <i>Lasiodiplodia regia</i> has been described from isolates taken from walnut (<i>Juglans regia</i>), kiwifruit (<i>Actinidia chinensis</i>), Chinese cherry (<i>Cerasus pseudocerasus</i>), Chinese date (<i>Ziziphus jujuba</i>), grapevine (<i>Vitis vinifera</i>) and peach (<i>Prunus persica</i>) showing symptoms of canker and dieback in China.	<i>Lasiodiplodia regia</i> is not present in New Zealand and causes canker, dieback, and gummosis in common walnut, kiwifruit, Chinese cherry, Chinese date, grapevine, peach. Kiwifruit, grapevine and peach can be imported from China on the nursery stock pathway.	Risk assessment determined that the newly described fungus does not represent a risk to New Zealand biosecurity on the kiwifruit, grapevine and peach nursery stock pathway because it is likely, based on available information, that the pathogen will be detected within the minimum 6 months of PEQ.	

Alert ID	Alert details	Significance	Summary	Field of Alert
10476	New research/new awareness: <i>Tomato apical stunt viroid</i> (TASVd) was detected in a capsicum (<i>Capsicum annuum</i>) seed lot imported to Australia.	<i>Tomato apical stunt viroid</i> is not present in New Zealand. TASVd is a serious pathogen of tomato causing leaf curling and lesions, apical stunting, vein yellowing, and small and deformed fruit. Capsicum can be imported from all countries on the seeds for sowing pathway.	Risk assessment determined that the new research/awareness that TASVd is seed-borne in capsicum seed does not represent a risk to New Zealand biosecurity on the seeds for sowing pathway as there is insufficient evidence of seed transmission in capsicum seed. The alert was sent to risk managers for their information.	
10559	Change in distribution: First report of <i>Halymorpha halys</i> (brown marmorated stink bug, BMSB) in Papua New Guinea. This is an unofficial, unconfirmed report at this stage.	BMSB is not present in New Zealand and causes damage to multiple host species. The aggregation and overwintering behaviour of BMSB increases their potential to be associated with inanimate and passenger pathways.	Risk assessment determined that the unofficial and unconfirmed report of BMSB in Papua New Guinea does not represent a risk to New Zealand biosecurity. We found no evidence confirming BMSBs presence in Papua New Guinea. We concluded that the report was likely to be the result of misidentification. Given the high profile of BMSB as a global invasive species, the ERS is likely to receive updates on changes in distribution from official sources.	
10587	Change in distribution: First report of <i>Citrus bark cracking viroid</i> (CBCVd) found infecting hops (<i>Humulus lupulus</i>) in Brazil.	<i>Citrus bark cracking viroid</i> is not present in New Zealand. It can cause stunting and yellowing of hop plants. Hops may be imported from Brazil on the nursery stock pathway.	Risk assessment determined that the change in distribution of CBCVd in Brazil does not represent a risk to New Zealand biosecurity on the hops nursery stock pathway because the viroid was recently assessed as part of the Hops IRA project for development of an all countries IHS. The alert was sent to risk managers for their information.	
10591	Change in distribution: First report of the white rust oomycete <i>Wilsoniana occidentalis</i> on spinach (<i>Spinacia oleracea</i>) in Germany.	<i>Wilsoniana occidentalis</i> is not present in New Zealand. It causes white rust symptoms in spinach. Spinach may be imported from Germany on the seeds for sowing pathway.	Risk assessment determined that the change in distribution of <i>W. occidentalis</i> in Germany does not represent a risk to New Zealand biosecurity on the spinach seeds for sowing pathway because there is insufficient evidence in the alert source to confirm that this pest is seedborne. The alert was sent to risk managers for their information.	
10614	Change in distribution: First report of <i>Olive mild mosaic virus</i> (OMMV) infecting garden tulips (<i>Tulipa gesneriana</i>) in South Korea.	OMMV may be present in New Zealand. It can cause mottling and yellowing of leaves on garden tulip, as well as spinach (<i>Spinacia oleracea</i>) and olive (<i>Olea europea</i>). Tulip bulbs and tissue culture and olive plants may be imported from South Korea on the nursery stock pathway.	Risk assessment determined that the change in distribution of OMMV in South Korea does not represent a risk to New Zealand biosecurity on the tulip or olive nursery stock pathways because this virus is likely to be present in New Zealand and is non-regulated. We have previously assessed that it is likely to have minimal impacts should it establish.	

Alert ID	Alert details	Significance	Summary	Field of Alert
10678	Change in Distribution: First report of grapevine borer <i>Xylotrechus pyrrhoderus</i> in Massachusetts, USA on wild grapes (<i>Vitis</i> sp.).	Grapevine borer is not present in New Zealand and causes wilting and death of grapevines. Grapevine, and two other hosts - Boston ivy (<i>Parthenocissus tricuspidata</i>) and porcelain-berry (<i>Ampelopsis brevipedunculata</i>) - may be imported from USA on the nursery stock pathway.	Risk assessment determined that the change in distribution of grapevine borer in USA does not represent a risk to New Zealand biosecurity on the nursery stock pathway because the borer only lays one egg per cutting, making it unlikely that a mating pair will arrive and establish in New Zealand. The alert was sent to risk managers for their information.	
10712	New country post border detection/incursion: First detection of <i>Tomato brown rugose fruit virus</i> (ToBRFV) in wastewater in Louisiana, USA.	<i>Tomato brown rugose fruit virus</i> is not present in New Zealand. It causes leaf mosaic and fruit distortion on tomato (<i>Solanum lycopersicum</i>) and capsicum (<i>Capsicum annuum</i>). Tomato and capsicum can be imported from the USA on the seeds for sowing pathway.	Risk assessment determined that the new post border detection/incursion of <i>Tomato brown rugose fruit virus</i> in the USA does not represent a risk to New Zealand biosecurity on the tomato and capsicum seeds for sowing pathway because these seeds are required to be produced in a Pest Free Area or Pest Free Place of Production, or to be tested for the virus. This alert was sent to risk managers for their information.	
10733	Change in distribution: First report of the fungus <i>Ceratocystis ficicola</i> infecting fig trees (<i>Ficus carica</i>) in Italy.	The fungus <i>Ceratocystis ficicola</i> is not present in New Zealand. It causes wilting on fig trees, eventually leading to the death of the tree. Fig can be imported from Italy on the nursery stock pathway.	Risk assessment determined that the change in distribution of <i>Ceratocystis ficicola</i> into Italy does not represent an increase in risk to New Zealand biosecurity on the <i>Ficus</i> nursery stock pathway because the potential for this fungus to cause impacts in New Zealand are negligible. This pathway has already been assessed by risk managers in a previous alert, therefore, this alert was sent to risk managers for their information.	
10734	Change in distribution: First report of <i>Tomato brown rugose fruit virus</i> (ToBRFV) infecting greenhouse tomatoes (<i>Solanum lycopersicum</i>) in Argentina.	<i>Tomato brown rugose fruit virus</i> is not present in New Zealand. It causes symptoms on fruit and foliage in tomato, resulting in severe crop loss. It also infects cheese weed (<i>Malva parviflora</i>) and common purslane (<i>Portulaca oleracea</i>), which can be imported from Argentina on the nursery stock pathway.	Risk assessment determined that the change in distribution of ToBRFV in Argentina represents a potential risk to New Zealand biosecurity on the cheese weed and common purslane nursery stock pathways as the virus can infect these hosts asymptotically. We have already sent a previous alert regarding this pathway for risk management evaluation, which is ongoing. Therefore, this alert was sent to risk managers for their information and to add Argentina to the list of countries where ToBRFV is present.	

Alert ID	Alert details	Significance	Summary	Field of Alert
10739	New research/new awareness: The first cases of resistance to pyrethroid and neonicotinoid-based insecticides by Asian citrus psyllid (<i>Diaphorina citri</i>) in Brazil.	Asian citrus psyllid is not present in New Zealand. It causes stunted and distorted shoot growth in citrus species. <i>Citrus</i> species may be imported from Brazil on the nursery stock pathway.	Risk assessment determined that the evidence of insecticide resistance in Asian citrus psyllids in Brazil does not represent a risk to New Zealand biosecurity on the nursery stock pathway because it is likely to be visibly detected and managed by required treatments using other insecticides. The alert was sent to risk managers for their information.	
10744	New country post border detection/incursion: The tau fruit fly, <i>Zeugodacus tau</i> (syn. <i>Bactrocera tau</i>), has been found in three trapping sites in the Stevenson Ranch area, California, USA. APHIS has established a quarantine area in Stevenson Ranch.	Tau fruit fly is not present in New Zealand. Larvae live in and eat the flesh of fruit causing bruising and rotting of host fruits such as pumpkin, squash, melons, cucumber, tomatoes, capsicum, mango and pawpaw. Of these hosts, New Zealand can import mango and pawpaw as fresh produce from the USA.	Risk assessment determined that the new country post border detection/incursion of <i>Z. tau</i> in the pest-free area of Stevenson Ranch, California does not represent a change in risk to New Zealand biosecurity on the fresh produce pathway. The alert was sent to the Offshore pathway assessment team for their information.	
10747	New country post border detection/incursion: Detection of a male Mediterranean fruit fly (<i>Ceratitidis capitata</i>) in urban areas in Cancun, Mexico.	Mediterranean fruit fly is not present in New Zealand. It causes damage to a wide range of fruit. Banana, grape and mango may be imported from Mexico on fresh produce pathway.	Risk assessment determined that the new country post border detection of Mediterranean fruit fly in Mexico does not represent an immediate risk to New Zealand biosecurity on the fresh produce pathway because the Med fly population in Mexico is not established and is under eradication. The alert was sent to the audit team for their information on the status of pest free areas in Mexico.	
10784	New host association: The potyvirus <i>Plum pox virus</i> (PPV) was isolated from leaves of the Linden tree (<i>Tilia</i> sp.) showing symptoms of viral infection in Turkey.	<i>Plum pox virus</i> is not present in New Zealand. It causes Sharka disease in stone fruit trees (<i>Prunus</i> spp.) and has recently been isolated from <i>Tilia</i> plants. <i>Tilia</i> may be imported from all countries on the nursery stock pathway.	Risk assessment determined that the new host association between <i>Plum pox virus</i> and <i>Tilia</i> does not represent a risk to New Zealand biosecurity because PPV was only isolated from symptomatic plants, so it is expected that symptoms will be expressed and detected within 3 months in PEQ. The alert was sent to risk managers for their information.	





Alert ID	Alert details	Significance	Summary	Field of Alert
10886	New research/new awareness: The USDA has released a new pest risk assessment on <i>Phytophthora ramorum</i> .	<i>Phytophthora ramorum</i> is not present in New Zealand. It causes sudden oak death in oak trees and ramorum blight in many plants, including rhododendron, camellia, and blueberry. Many hosts may be imported as nursery stock although the countries from which plants can be sourced are restricted to Australia, Israel, Japan, and South Africa.	Risk assessment determined that the new awareness provided in the USDA's recent pest risk assessment on <i>P. ramorum</i> does not represent a change in risk to New Zealand biosecurity on the nursery stock pathway because known hosts may only be sourced from four countries which either control the pest or do not have it. However, the USDA assessment was passed on to risk assessment because it contains information that might be valuable in MPI's PRA of <i>P. ramorum</i> , which is currently being drafted. The alert was sent also to risk managers for their information.	

Table 5: Actively monitored risks

Risk analysts and managers have determined that these alerts do not represent an increase to biosecurity risk at this time but should be monitored for change in risk during the reporting period. We actively monitor these causative agents (through internet and literature searches) in addition to passively monitoring through the ERS.

Alert ID	Alert details	Significance	Summary	Field of Alert
9858	New host association: The fungus <i>Cytospora mali</i> (identified in the alert source under the synonym <i>Valsa mali</i>) was identified in spinach (<i>Spinacia oleracea</i>) seed lots from New Zealand.	The fungus <i>Cytospora mali</i> is not known to be present in New Zealand. It causes canker in apple and pear and was detected by molecular sequencing on spinach seeds exported from New Zealand. Spinach can be imported from China, Japan, and South Korea on the seeds for sowing pathway.	Risk assessment determined that the new host association of <i>Cytospora mali</i> on spinach (<i>Spinacia oleracea</i>) does not represent a risk to New Zealand biosecurity on the seeds for sowing pathway because there is not enough evidence that spinach is truly a host of this fungus. The alert was sent to risk managers for their information, and the ERS will actively monitor the literature for <i>Cytospora mali</i> associated with spinach.	
10700	Change in distribution/New host association: First report of the fungus <i>Cytospora azerbaijanica</i> causing canker and shoot dieback on peach (<i>Prunus persica</i>) in California, USA.	The fungus <i>Cytospora azerbaijanica</i> is not present in New Zealand. It causes canker and shoot dieback in peach and apple. Peach and apple can be imported from USA on the nursery stock pathway.	Risk assessment determined that the new host association and change in distribution of <i>C. azerbaijanica</i> on peach in the USA does not represent a risk to New Zealand biosecurity on the nursery stock pathway because symptoms are likely to show within the PEQ period. Because there is not much literature on the organism to date, the ERS team will actively monitor the literature for information on the species.	
10701	Newly described organism/taxon: The fungus <i>Diaporthe actinidiicola</i> was isolated from gold kiwifruit (<i>Actinidia chinensis</i>), pear (<i>Pyrus</i> sp.) and walnut (<i>Juglans regia</i>) in China.	<i>Diaporthe actinidiicola</i> is not present in New Zealand. It causes canker and dieback in kiwifruit, pear and walnut. Kiwifruit can be imported from China on the nursery stock pathway. There is a schedule in the nursery stock import health standard for pear, although this requires assessment as this pathway hasn't been traded on since before 2017. Walnut cannot be imported as nursery stock from China.	Risk assessment determined that the newly described organism, <i>Diaporthe actinidiicola</i> , does not represent a risk to New Zealand biosecurity on the nursery stock pathway because, based on available information, it is expected that symptoms of infection would be detected within the required PEQ periods for kiwifruit and pear nursery stock. The alert was sent to risk managers for their information. The ERS team will also actively monitor the literature for new information regarding the biology and pathogenicity of this fungus.	




Alert ID	Alert details	Significance	Summary	Field of Alert
10736	Newly described organism/taxon: The bacterium <i>Pseudomonas alliivorans</i> has been described from onion (<i>Allium cepa</i>) foliage in the USA.	<i>Pseudomonas alliivorans</i> is not present in New Zealand. It causes foliar damage to onion. Onion may be imported from the USA on the nursery stock and fresh produce pathways.	Risk assessment determined that the newly described organism/taxon, <i>P. alliivorans</i> , on onion does not represent a risk to New Zealand biosecurity on the nursery stock or fresh produce pathways because symptoms are likely to be noticed upon inspection. The ERS team will actively monitor for new literature about <i>Pseudomonas alliivorans</i> .	
10763	Change in distribution: <i>Pseudocercospora pini-densiflorae</i> (brown needle disease) was reported to be present in Australia. This has not been officially confirmed by the NPPO of Australia.	Brown needle disease is not present in New Zealand. It causes needle blight in numerous <i>Pinus</i> spp. Species of pine cannot be imported as nursery stock but can be imported as seed stock from Australia.	There is high uncertainty around the report of brown needle disease in Australia and it remains unclear whether the fungus is established or widely distributed in Queensland. Based on the available information, risk assessment does not consider the report represents a change in risk to New Zealand biosecurity because there is no import health standard for <i>Pinus</i> nursery stock, wood products are debarked and kiln dried which would kill fungal spores and seed for sowing require fungicide treatment. No evidence was found of long-distance wind dispersal however, the ERS team will actively monitor the literature for changes in information on long-range wind dispersal and changes in distribution within Australia. The ERS team will also send this assessment to the BSI team for monitoring of wind dispersal.	
10805	New research/new awareness: <i>Mungbean yellow mosaic virus</i> (MYMV) is seed borne in black gram (<i>Vigna mungo</i>).	<i>Mungbean yellow mosaic virus</i> (MYMV) is not present in New Zealand and causes yellow mosaic disease in cow pea, black gram and soybean. This virus has been reported to be seed-borne in black gram. Black gram can be imported on the seeds for sowing pathway.	Risk assessment determined that the new research awareness of MYMV being seed-borne on black gram seed does not represent a potential risk to New Zealand biosecurity because the virus is highly unlikely to be exposed to the New Zealand environment. Black gram is not commercially grown in New Zealand and it is uncertain whether plants germinating from MYMV-infected black gram seeds can produce viable MYMV virus. Monitoring for more evidence of seed transmission is already underway.	

Table 6: Alerts shared with border staff

Where the existing measures on a pathway already manage risks identified in ERS, information may still be passed to border staff for their awareness particularly where pests might be arriving from new locations or in higher abundance.









Alert ID	Alert details	Significance	Summary	Field of Alert
10807	New research/new awareness: There has been a report of an outbreak of spotted lanternfly, <i>Lycorma delicatula</i> , on the east coast of the USA.	Spotted lanternfly inflicts significant damage to a number of host plants through direct feeding and through honeydew secretion causing sooty mould to grow. Several of the host plants such as grapes, apples and stone fruit are grown in New Zealand.	Risk assessment determined that the outbreak of spotted lanternfly in the USA does not indicate a potential emerging risk to New Zealand on the roll on-roll off vessels pathway from the USA because egg masses are likely to hatch in transit and nymphs are likely to starve before reaching New Zealand. However, given the potential impacts if spotted lanternfly were to establish in New Zealand, it requires situational awareness at the border. This will include a request that any viable egg masses or live SLF adults or nymphs are identified and recorded and that the information is passed on to risk assessment and other interested parties.	

Table 7: Alerts pending risk management evaluation

Risk assessment determined that the new information may represent a risk to New Zealand biosecurity on one or several pathways. The below alerts were passed on to risk managers and are pending risk management evaluation.

Alert ID	Alert details	Significance	Summary	Field of Alert
8083	New research/new awareness: Potential for seed transmission of the fungus <i>Verticillium longisporum</i> in oilseed rape (<i>Brassica napus</i>)	<i>Verticillium longisporum</i> is not present in New Zealand. It causes Verticillium wilt on several brassicas and stem streaking on oilseed rape. Oilseed rape can be imported on the seeds for sowing pathway.	Risk assessment determined that the new research/new awareness regarding the potential for this fungus to be seed transmitted on oilseed rape represents a potential risk to New Zealand biosecurity on the seeds for sowing pathway. This alert was sent to risk managers for risk management evaluation.	
10236	Change in distribution/New country post border detection/incursion: First report of <i>Ralstonia pseudosolanacearum</i> detected in water in Hungary.	<i>Ralstonia pseudosolanacearum</i> is not present in New Zealand and causes bacterial wilt disease in a large range of host plants. Multiple hosts may be imported on the nursery stock pathway.	Risk assessment determined that the new change in distribution of <i>R. pseudosolanacearum</i> in Hungary represents a potential risk to New Zealand biosecurity on the nursery stock pathway. The alert will be sent for risk management evaluation.	
10345	New host association. A DAFF pest risk assessment of the bacterium <i>Xylella fastidiosa</i> has identified approximately 70 host genera comprising over 200 species that are not included in the EFSA host list for the bacterium.	<i>Xylella fastidiosa</i> causes severe damage in several major crops including <i>Citrus</i> and <i>Vitis vinifera</i> (grapevine). <i>Xylella fastidiosa</i> has hundreds of host plant species, many of which are present in New Zealand and may be imported as nursery stock.	Risk assessment determined that the new host association between <i>Xylella fastidiosa</i> and 70 additional genera as identified by DAFF represents a potential risk to New Zealand biosecurity. The alert was passed on to risk managers for risk management evaluation.	
10450	New host association: <i>Apple dimple fruit viroid</i> (ADFVd) detected in diseased pomegranate (<i>Punica granatum</i>) fruits in Spain.	ADFVd is not known to be present in New Zealand. The viroid causes symptoms in apples that render them unsaleable. It is also present throughout the host plant but does not cause symptoms on leaves or branches. The new host, pomegranate, may be imported from all countries on the nursery stock pathway.	Risk assessment determined that the new host association between ADFVd and pomegranate represents a potential risk to New Zealand biosecurity on the nursery stock pathway. The alert will be sent for risk management evaluation.	

Alert ID	Alert details	Significance	Summary	Field of Alert
10455	New research/new awareness: The fungus <i>Phellinus noxius</i> causes asymptomatic infection in the dwarf voodoo lily (<i>Typhonium blumei</i>), Buffalo grass (<i>Paspalum conjugatum</i>), knot grass (<i>Paspalum distichum</i>), basket grass (<i>Oplismenus compositus</i>), blackjack (<i>Bidens pilosa</i>), southern crabgrass (<i>Digitaria ciliaris</i>), and manila grass (<i>Zoysia matrella</i>) in Taiwan.	<i>Phellinus noxius</i> is not present in New Zealand. It causes death of trees and loss of fruit yield in a wide range of plant species. Of the newly reported asymptomatic hosts, Blackjack can be imported from all countries on the nursery stock pathway.	Risk assessment determined that the new research/ awareness that <i>Phellinus noxius</i> causes asymptomatic infection in blackjack in Taiwan represents a potential risk to New Zealand biosecurity on the nursery stock pathway. The alert will be sent for risk management evaluation.	
10549	Change in distribution: First report of the fungus <i>Fusarium denticulatum</i> associated with chlorotic leaf distortion on sweet potato (<i>Ipomoea batatas</i>) in China.	<i>Fusarium denticulatum</i> is not present in New Zealand. It causes chlorotic leaf distortion, with mildly twisted young leaves and stunted vine growth in sweet potato. Sweet potato can be imported from all countries as nursery stock and seeds for sowing.	This risk assessment found no evidence that the <i>F. denticulatum</i> is seed transmitted but determined that the change in distribution of the fungus in China represents a risk to New Zealand biosecurity on the nursery stock pathway. The alert was sent to risk manager for risk management evaluation.	
10726	Change in distribution: The bacterium <i>Acidovorax citrulli</i> was found in Mexico on watermelon (<i>Citrullus lanatus</i>).	<i>Acidovorax citrulli</i> is not present in New Zealand. It causes seedling blight and fruit blotch in cucurbits, tomato, and eggplant. These hosts may be imported from Mexico on the seeds for sowing pathway.	Risk assessment determined that the change in distribution of <i>Acidovorax citrulli</i> in Mexico represents a potential risk to New Zealand biosecurity on the cucurbit, tomato, and eggplant seeds for sowing pathway. The alert was sent to risk managers for risk management evaluation.	
10810	New research/new awareness: <i>Chili pepper mild mottle virus</i> (CPMMoV) is seed transmitted in capsicum (<i>Capsicum</i> spp.).	<i>Chili pepper mild mottle virus</i> causes mottling and distortion of leaves in <i>Capsicum</i> spp. The virus is not present in New Zealand and <i>Capsicum</i> spp. may be imported on the seeds for sowing pathway.	Risk assessment determined that the new research which provides evidence of seed transmission for CPMMoV in Capsicum seed represents a potential risk to New Zealand biosecurity on the Capsicum seeds for sowing pathway. The alert was sent to risk managers for risk management evaluation.	