Biosecurity New Zealand
Tiakitanga Pūtaiao Aotearoa

MPI Emerging Risks System for Biosecurity

22nd Stakeholder Report
20 March – 20 September 2021

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New Zealand Government

Ministry for Primary Industries
Manatū Ahu Matua

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Overview of MPI Emerging Risks System – Biosecurity (ERS)

The MPI Emerging Risks System – Biosecurity (ERS) is designed to proactively identify and manage emerging risks to New Zealand's biosecurity. The ERS focusses on hazards to plant and animal health and invasive species in the terrestrial and aquatic environments. The current priorities of the ERS are significant changes to the number, distribution, or epidemiology of exotic organisms of biosecurity concern to New Zealand.

Alerts are progressed into the ERS for initial assessment if they contain new information about a biosecurity risk species, such as a newly reported host/commodity, a new distribution, or a newly described species. A significant proportion of alerts sent to the ERS are not progressed into the ERS, because the information in the alert is already known or does not signal an increased risk to New Zealand biosecurity.

After initial risk assessment, alerts progressed into the system have various outcomes.

- Alerts may be closed with no further assessment required, because the assessment indicates that the risk is currently managed or there is no pathway. Closed alerts may result in:
    - setting up active monitoring to alert the ERS to any new relevant information that could influence future decision making, and/or
    - situational awareness reports being sent to MPI border staff, and/or
    - the assessment being sent "for your information" (FYI) to MPI risk managers.
- Alerts may be sent to a specialist MPI risk analyst for further assessment.
- Alerts may be sent to an MPI risk manager to determine if additional risk management, e.g. changes to an import health standard or readiness plan, is required.

Alerts sent to a specialist MPI risk analyst also have various outcomes.

- Alerts may be closed, with no further assessment required. Closed alerts may result in:
    - active monitoring being set up, and/or
    - situational awareness reports being sent to MPI border staff, and/or
    - the assessment being sent as an FYI to MPI risk managers.
- Alerts may be sent to an MPI risk manager to determine if additional risk management is required.

Likewise, alerts sent to an MPI risk manager have various outcomes.

- Alerts may be closed, with no further assessment required. Closed alerts may result in:
    - active monitoring being set up, and/or
    - situational awareness reports being sent to MPI border staff.
- Alerts may lead to risk management action being taken, e.g. changes being made to an import health standard or readiness plan.

The MPI Emerging Risks System is explained in more detail in Appendix 1.

ERS alert data

Since the launch of the ERS on 31 August 2012, the system has received a total of 18,744 alerts; 2,379 of these have been progressed to the risk assessment stage after initial screening. Information about the outcome of these alerts is presented in Table 1The number of alerts entered into the ERS during the reporting period is presented in Table 2. All activity in the reporting period, regardless of submission date, is presented in Table 3. Many of these activities occurred for alerts submitted into the ERS prior to the reporting period.

Table 1. Data breakdown of alerts which have undergone initial screening in the ERS, from 31 August 2012 to 20 September 2021.

Alert category	Number	Details
Total number of alerts completing initial screening	18,744	
Total alerts requiring risk assessment	2,379	**12.7%** of total alerts screened
Alerts closed after risk assessment (did not require risk management evaluation)	1,722	**72.4%** of alerts requiring risk assessment
Alerts awaiting conclusion of risk assessment	93	**3.9%** of alerts requiring risk assessment
Alerts requiring risk management evaluation	564	**23.7%** of alerts requiring risk assessment
Alerts logged for consideration at next review of relevant import health standards	213	**9%** of alerts requiring risk assessment **37.8%** of alerts requiring risk management evaluation
Alerts resulting in urgent changes to import health standards	51	**2.1%** of alerts requiring risk assessment **9%** of alerts requiring risk management evaluation
Alerts resulting in active monitoring	550	**23.1%** of alerts requiring risk assessment
Alerts resulting in situational awareness for MPI border staff	89	**3.8%** of alerts requiring risk assessment

A complete list of all alerts sent to the ERS since its launch on 31 August 2012 is available in previous stakeholder reports. Copies are available on request.

ERS report for 20 March to 20 September 2021

This stakeholder report is the 22nd in a series of updates for MPI staff and external stakeholders on the ERS. Appendix 2 provides a summary of all activity and conclusions in the ERS from 20 March to 20 September 2021.

Summary of actions from 20 March to 20 September 2021

From 20 March to 20 September 2021, 714 potential biosecurity risks were screened, out of which 84 underwent risk assessment and:

- none resulted in an urgent change of an import health standard (IHS);
- four resulted in the need for situational awareness for border staff;
- 21 resulted in active monitoring; and
- 47 were logged for future IHS amendments.

ERS alerts received from 20 March to 20 September 2021

Table 2. Initial screening outcome of all ERS alerts received from 20 March to 20 September 2021.

Alert category	Number	Details
Total alerts received andrequiring initial screening	726	**174** related to **terrestrial animal** health **68** related to **aquatic** animal health **484** related to **plant** health
Alerts closed after initial screening	626	**86.2%** of total alerts screened
Alerts requiring risk assessment	79	**10.9%** of total alerts screened
Alerts awaiting initial screening	21	**2.9%** of total alerts screened

Activity in the ERS from 20 March to 20 September 2021

These activities apply to alerts received both before and during the period of this report. Often activities within the ERS Alerts progress through the ERS at different paces and some activites associated before 20 March were completed during the period covered by this report.

Table 3. All activity in the ERS occurring 20 March to 20 September 2021

Alert category	Number	Details
Alerts completing initial screening	714	
Alerts closed after initial screening	630	**88.2%** of alerts completing initial screening
Alerts that progressed to risk assessment	84	**11.8%** of alerts completing initial screening
Alerts completing risk assessment	92	
Alerts closed after risk assessment	39	**42.4%** of alerts completing risk assessment
Alerts requiring risk management evaluation following risk assessment	25	**27.2%** of alerts completing risk assessment

Outcome of alerts completing risk management evaluation	11	• **Four** managed by existing standards
		  ○ One required no further action
		  ○ One resulted in situational awareness for border staff
		  ○ Two required monitoring for change
		• **One** required an urgent change to an import health standard

Alerts resulting in active monitoring	21	• **18** from alerts closed after risk assessment • **Three** after risk management evaluation
Alerts resulting in situational awareness for border staff	4	• **Three** from alerts closed after risk assessment • **One** after risk management evaluation

Examples of recent alerts

Below are some of the alerts that resulted in the need for further risk assessment or a review of risk management (e.g. IHS amendment) and/or involved organisms that may pose a risk to New Zealand.

Alert 8305: *Ralstonia solanacearum*

Received on 12 June 2021 from Google Scholar, outline of a research article describing validation and use of a qPCR protocol to quantify the spread of *Ralstonia solanacearum* in susceptible and resistant eucalypt plants.

Conclusion:

The risk from *Ralstonia solanacearum* may not be fully mitigated by existing measures in the *Nursery Stock* and *Seeds for Sowing* import health standards. Amendments to these standards will be logged for risk management changes to be considered at the next review of the standards for the following reasons:

- There is limited research demonstrating seed transmissibility in eucalyptus species.
- The nursery stock pathway is currently inactive.
- It is likely that infected plants would exhibit symptoms during the post-entry quarantine period.

Active monitoring for any new information regarding resistant host species has also been initiated.

Rationale:

On 12 June 2021, the ERS received a Google Scholar alert for a research article describing an intercalating dye-based real-time PCR protocol to detect *Ralstonia solanacearum* in symptomless eucalypt plant tissue. Researchers found the bacterium can spread in susceptible and resistant eucalypt plant tissue.

Ralstonia solanacearum is an aerobic non-spore-forming, Gram-negative, plant pathogenic bacterium. It is the causal agent of plant wilt disease in more than 200 plant species within 53 different botanical families. Globally, the species has caused significant losses of economically important agricultural crops.

The last confirmed record of *R. solanacearum* in New Zealand was more than 40 years ago. A systematic literature review was conducted by MPI's Plant Risk Assessment Group, which concluded that there is no recent evidence to suggest that any strains of *R. solanacearum* are present in New Zealand.

This alert was progressed for risk management evaluation because the the risk assessment found that seeds for sowing and nursery stock are possible entry pathways into New Zealand for *R. solanacearum*. New Zealand climate is known to be suitable for the establishment of the bacterial species. Furthermore, many of the host plants are widely planted in New Zealand, such as potato, tomato, and capsicum, and the wide host range is also likely to aid in establishment.

Alerts 8504 and 8541: *Liriomyza huidobrensis* and *L. trifolii*

Received on 28 July 2021 from the Australian Department of Agriculture, Water and Environment (DAWE), informed MPI that Australia will be publishing an International Plant Protection Convention notification for an outbreak of *Liriomyza huidobrensis* and *L. trifolii*, along with proposed management measures.

Conclusion:

Fresh Produce from Australia was identified as a potential entry pathway into New Zealand for *L. huidobrensis* and *L. trifolii*. Risk management evaluation is currently underway. A situational awareness report for *Liriomyza* species was generated, by the Plant Pest and Risk Assessment team, for border staff.

Rationale:

On 28 July 2021, the ERS was alerted by DAWE of an outbreak of *Liriomyza huidobrensis* in New South Wales and Southern Queensland and of *L. trifolii* in Northern Australia, Western Australia and Queensland.

Liriomyza species are polyphagous and have 49 recorded host plant families. *Liriomyza* feeding damage can reduce plant yield and result in economic losses for producers. In New Zealand, *L. huidobrensis* alone has the potential to affect industries worth ~$2 billion in exports. *Liriomyza* species are difficult to manage and are resistant to many pesticides.

The risk assessment identified fresh produce from Australia as a possible entry pathway for *Liriomyza* species. Risk management evaluation and assessment of appropriate measures is underway. A situational awareness report was generated and sent to border staff to inform them of the increased risk on fresh produce and cut flower pathways from Australia.

Alert 8611: *Colletotrichum orchidearum*

Received on 23 Aug. 2021 from the International Biosecurity Intelligence System (IBIS) described *Colletotrichum orchidearum* infecting *Anthurium andraeanum* var. Tropical Red in Sri Lanka.

Conclusion:

Risk from the fungus may not be fully mitigated by current measures on the cut flowers and foliage for decorative purposes pathway and nursery stock. As such,the alert is undergoing risk management evaluation for amendments to import health standards.

Rationale: On 23 August 2021, the ERS was notified by IBIS of *Colletotrichum orchidearum* causing spathe rot of *Anthurium andraeanum* var. Tropical Red for the first time in Kandy District, Sri Lanka.

The *Colletotrichum orchidearum* species complex currently consists of eight closely related species, including three species (*C. orchidearum, C. plurivorum* and *C. sojae*) that are very common and occur on many host species, and a number of less common species that seem to be either host- or country-specific.

Symptoms appear as small, slightly sunken, circular, water-soaked spots which become enlarged and develop into numerous brown scattered irregular lesions surrounded by a yellow ring.

Two unmanaged pathways were found as part of the risk assessment of this alert; *Anthurium andraeanum* (flamingo lily) cut flowers and foliage for decorative purposes from Thailand and *A. andraeanum* nursery stock from the Netherlands.

Due to the potential for asymptomatic hosts and earlier bypasses of border measures, the likelihood of entry into New Zealand was determined to be high. There is a high likelihood for the establishment of *C. orchidearum* in New Zealand due to climate suitability and host availability.

Alert 6467: *Glaesserella australis*

Received on 7 May 2020 from DAWE regarding research confirming *Glaesserella australis* as the cause of lesions, abscesses and pleurisy in pigs in Australia.

Conclusion:
The risk of entry, exposure, establishment, spread and impacts of *G. australis* infected pigs from Australia was assessed to be very low. The alert was closed after risk assessment and monitoring for new information regarding the species was initiated.

Rationale:
The ERS was notified by an official from DAWE about research from the University of Queensland regarding a novel *Glaesserella* sp. being isolated from pigs with severe respiratory infections.

The prevalence of this novel pathogen within Australian pig populations is currently unknown. Researchers analysed dozens of samples taken from pig lungs with lesions, abscesses and pleurisy. The animals came from farms across the country, including 43 from Queensland, 27 from Victoria, 23 from New South Wales and one from South Australia.

Risk assessment was conducted on all potential entry pathways for the bacterial species,found to be very low and adequately managed by current measures. Furthermore, the risks of exposure, establishment and spread of *G. australis* in New Zealand were found to be very low due to the known biology of the organism.

As *G. australis* is a recently discovered species, there is paucity of information in the published literature on its pathogenicity and clinical manifestation. Hence, MPI will monitor for any new information and or change in risk associated with the bacteria.

Appendix 1: Background on MPI Emerging Risks System

WHAT: TheEmerging Risks System for Biosecurity (ERS) is a centralised system that takes a systematic intelligence-led approach to enable early prioritisation and coordination of risk-based interventions for new and emerging biosecurity risks across MPI and industry.

TheERS monitors the flow and uptake of information of potential emerging biosecurity risk, including actions taken by risk analysts and risk managers.

FOCUS: The current focus of the ERS is information that signals significant changes to the distribution, hosts, or virulence of exotic organisms of biosecurity concern. It covers risks affecting plants and animals (terrestrial or aquatic) or organisms that may carry human disease.

Regular reporting from across the Ministry and external stakeholders provides information to identify key emerging risks and coordinate risk-based interventions.

WHEN: The ERS was implemented in August 2012. It is continually being improved.

WHY: Identifying potential and emerging threats is an important component of effective biosecurity risk management. Staff from across MPI have historically kept watch on new and emerging pests and diseases. Doing this in a coordinated way and ensuring appropriate action was being taken was, however, challenging.

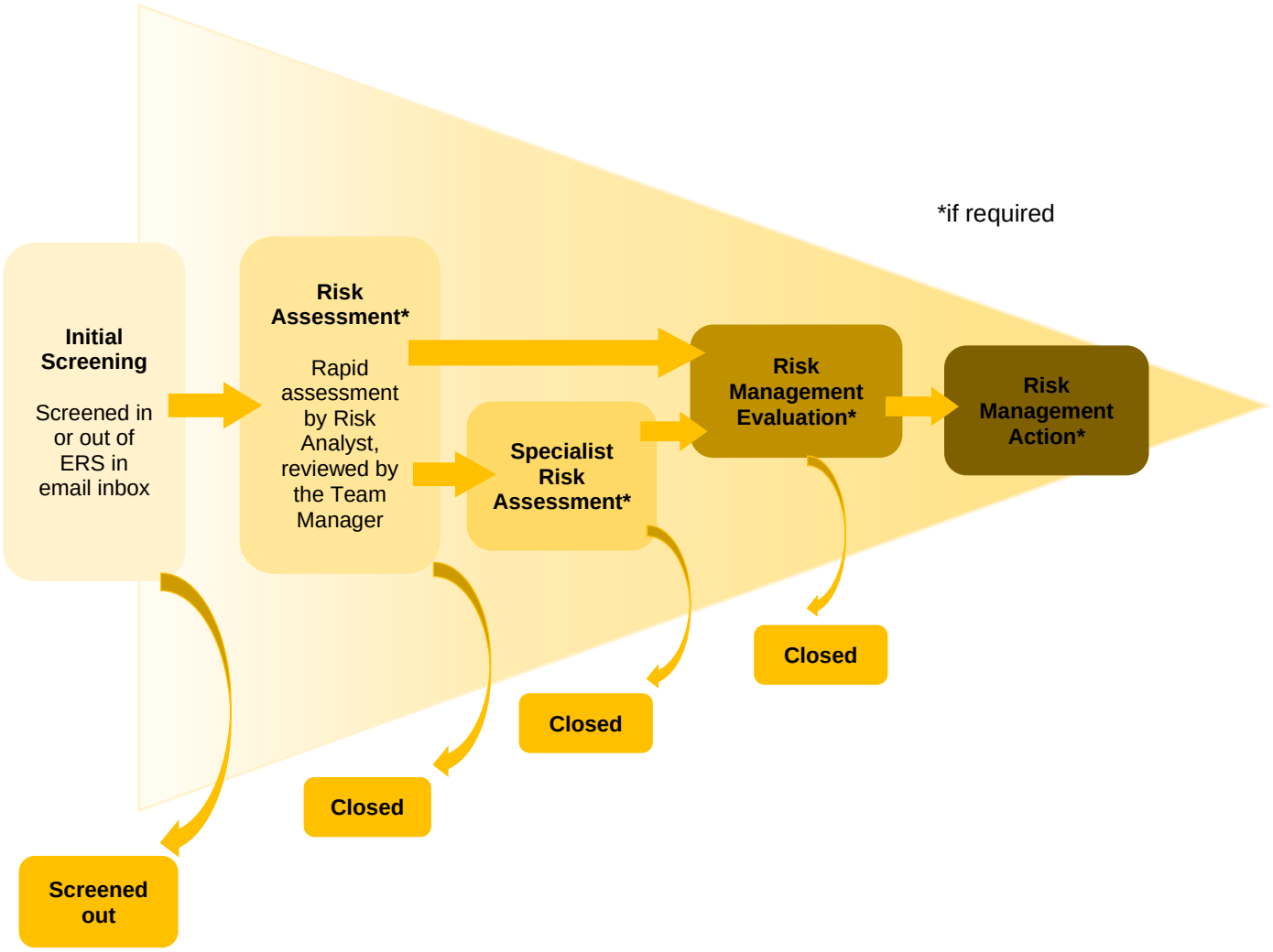
The MPI ERS provides a clear entry point for emerging risk information from staff, stakeholders and other sources to enter the organisation, be properly assessed and have appropriate action taken. Importantly, it also provides a mechanism to communicate emerging risks to stakeholders so they also have an opportunity to consider and take appropriate action within their own sphere of influence.

HOW: The ERS enables every New Zealander to engage with the system and be biosecurity-conscious. You can send any new information about a potential new pest that could impact your industry, and/or New Zealand's biosecurity system to emergingrisks@mpi.govt.nz.

Industry members are key contributors of alerts. These alerts are prioritised in the MPI ERS, because experience has taught us that industry members are the most valuable sources of information on emerging biosecurity risks.

Risk management action is undertaken if the alert signals an increased risk to New Zealand biosecurity. An example of action is the amendment to a schedule of an import health standard to manage the changed risk.

THE EMERGING RISKS SYSTEM FOR BIOSECURITY – PROCESS



STEPS INVOLVED IN THE ERS PROCESS

1. The ERS receives an email, and an alert is opened. External stakeholders and MPI staff are all contributors to the ERS. The following global electronic notification systems also provide alerts for the ERS:

   - European and Mediterranean Plant Protection Organization (EPPO) alerts
   - International Biosecurity Intelligence System (IBIS) alerts
   - PestLens – a United States Department of Agriculture exotic plant pest monitoring system that provides timely information to support informed safeguarding against pests that threaten U.S. agriculture and natural resources
   - ProMed (Program for Monitoring Emerging Diseases) – an Internet-based reporting system dedicated to rapid global dissemination of information on outbreaks of infectious diseases and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed
   - Plant Science Scan – a Canadian Food Inspection Agency, Plant Health Science Division scan of external sources for information that might be of regulatory significance or interest to Canada's national plant health

2. Initial screening of multiple information sources is carried out with a science-based filter that uses specified criteria. The alert is either screened in or out based on whether we are aware of the information already; whether the information concerns something of value in New Zealand; or whether it concerns a change in distribution or host.

3. If an alert is not closed after initial screening, a risk assessment is undertaken to determine whether there is a change or increase in risk to New Zealand biosecurity.

4. If the alert signals any change in risk profile, risk management evaluation is undertaken by risk managers to determine whether current risk measures are sufficient for an emerging risk. An assessment is made of what action (if any) may be needed (offshore, at the border, or in readiness and response planning).

5. If further risk assessment of the alert information is required (either by the original risk analyst or the risk manager), the alert goes to a specialist risk analyst.

6. If the alert does not currently signal an increased risk to New Zealand biosecurity (e.g. measures are already in place to manage risk), the alert is recorded and closed.

7. When an alert is closed, regardless of the stage at which it was closed and the outcome, the submitter (if it was an individual rather than an automated alert system) is notified of the outcome and the rationale behind the outcome.

8. Regular reporting to stakeholders to identify key emerging risks and for the coordination of risk based interventions.

The risk management evaluation conducted by risk managers involves checking a number of sources and considering these questions:

- Are there any identified hosts or associated products that are eligible for import under a valid import health standard (IHS)?
- Are there already specific pre-export, onshore (border) or offshore measures in place that would appropriately manage the emerging risk?
- Does a standard need to be amended, revoked or suspended? Are amendments required urgently?
- Do procedures at the border require urgent amendments?
- Are there commodities in transit to New Zealand that we need to take action on?
- Are we already sufficiently prepared? If not, is the residual risk sufficient to warrant preparedness actions?
- Are there other factors that make action advisable?
- What communications are required and what audience needs to be targeted (includes internal and external stakeholders – exporters, importers, national plant protection organisations (NPPOs), Minister, MPI officials etc.)?
- Do stakeholders need to be involved in this decision?

HOW YOU CAN HELP

Email any new information on potential emerging biosecurity risks directly to the ERS at EmergingRisks@mpi.govt.nz. Furthermore, exotic or unwanted organisms can be reported on MPI's pest and disease hotline at 0800 80 66.

As a guide, we are particularly interested in events that, in your experience or noted through your contacts, might be "significant" changes to the number, distribution, hosts, or epidemiology of exotic organisms of biosecurity concern. For example: witnessing outbreaks in unusual circumstances overseas on plants or animals that are in New Zealand; receiving reports of pests and diseases occurring on new hosts that have not been seen before; receiving reports about outbreaks of disease in new animal populations overseas. Early alerts to these situations provide an opportunity to more effectively respond to and communicate these new risks.

As the scope of the system expands to cover biosecurity impacts and potential new pathway information, we will be interested in receiving information on any big changes to the way we do business in New Zealand where this may impact on our biosecurity risk profile, for example, large-scale changes that may mean we might import higher volumes of particular commodities or cultivate new animal or plant varieties on a wider scale.

The first step in the ERS screens multiple information sources according to a science-based filter that uses specified criteria. The risk analyst receives and assesses the "alert" against specified criteria, which include:

- Have we looked at this before?
- What has changed?
- What is the potential for organism establishment and impact?
- Are there viable pathways?
- What does the information mean about the risk? Has it changed substantially?
- Is it worth considering further?

- Is it urgent?

Where the information does not indicate a significant emerging risk, the alert is closed and the information filed.

VALUE OF THE MPI EMERGING RISKS SYSTEM – BIOSECURITY

- The ERS has systematically increased the rate at which MPI is informed of new information on pests and diseases associated with commodities. There is a significant amount of new information signaling pests and diseases associated with imports that is captured by the centralised process of the ERS, and then communicated to the right people.
- The ERS has highlighted that for certain animal or plant species (e.g. grapes), our knowledge of associated risks is changing radically (new information, new pathways).
- The ERS is used systematically as a source of information by risk managers to consider whether new risks have arisen when issuing permits under import health standards.
- The ERS has resulted in streamlining the communication of emerging risk information to relevant parties—resulting in a less scatter-gun communication and response (with decreased duplication of risk assessment).
- The ERS has led to amendments to MPI's current measures in response to emerging risks processed by the system.
- The ERS provides confidence that MPI's risk management programme is adapting to the changing environment of emerging risk information.
- The ERS is continuously improving. Improvements include refining decision criteria throughout the system; increasing the administrator's role in monitoring system performance; evaluating system performance through quality assurance reviews; and creating system evaluation discussions between risk assessment teams and risk management teams.
- The ERS provides the opportunity to apply a quality assurance process to MPI's identification and management of emerging risks.

Appendix 2: Summary of actions and conclusions of emerging risk alerts (20 March – 20 September 2021)

RISK MANAGEMENT IS UNDERWAY

Risk management action is undertaken when the alert signals an increased risk to New Zealand biosecurity. Amendment to a schedule of an import health standard is currently being undertaken to manage the changed risk.

Field	Species/ causative agent	Organism	Hosts identified in alert	Details	Standard to be changed	Alert #	Date added to ERS
Plant Health	*Tomato leaf curl New Delhi virus* (ToLCNDV)	Virus	*Chrysanthemum indicum; Crossandra infundibuliformis*	New host association: first reports (in 2018) of *Tomato leaf curl New Delhi virus* (ToLCNDV) infecting *Chrysanthemum indicum* (syn. Dendranthema indicum), and *Crossandra infundibuliformis* (firecracker flower) in India.	*Importation of Nursery Stock*	7338-1	13/11/2020

ALERTS USED FOR SITUATIONAL AWARENESS TO ASSIST BORDER STAFF

Additional information from assessed alerts was passed on to assist border staff for their situational awareness.

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Alert #	Date added to ERS
Plant health	*Achatina fulica*	Mollusc	Multiple	Other: Increased border interceptions of *Achatina fulica* (giant African land snail) on cargo entering Australia.	7937	18/03/2021
Plant health	*Liriomyza huidobrensis*	Insect	Multiple	New country post border detection /incursion: Australia published an International Plant Protection Convention (IPPC) notification on 30 July 2021 for an outbreak of serpentine leafminer *Liriomyza huidobrensis*.	8504	28/07/2021
Plant health	*Liriomyza trifolii*	Insect	Multiple	New country post border detection /incursion: Australia published an International Plant Protection Convention (IPPC) notification on 30 July 2021 for an outbreak of American serpentine leafminer *Liriomyza trifolii.*	8541	28/07/2021
Animal health	Chronic wasting disease (CWD)	Prion	Cervidae	News item reporting that CWD (chronic wasting disease—prion affecting cervids) has spread to southwest Montana (USA), a prominent part of the greater Yellowstone ecosystem.	7542-5	13/12/2020

RISK MANAGEMENT CHANGES TO BE CONSIDERED AT NEXT REVIEW OF IMPORT HEALTH STANDARD

The changed risk is not covered by an existing standard. However, the affected commodity is not currently imported from countries/regions that pose a risk. The changed risk is logged for amendment consideration of import health standard at next review. In the meantime, it is managed on an import-by-import basis.

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Alert #	Date added to ERS
Plant health	*Acidovorax citrulli*	Bacterium	*Solanum lycopersicum; Solanum melongena*	Change in distribution/new host association: First report of *Acidovorax citrulli* on tomato (*Solanum lycopersicum*) seedlings in Greece.	7761-1	5/02/2021
Plant health	*Curtobacterium flaccumfaciens* pv. *flaccumfaciens*	Bacterium	*Glycine max* (soybean)	Change in distribution: *Curtobacterium flaccumfaciens* pv. *flaccumfaciens* has been reported for the first time from Zambia. The bacterium was detected in symptomatic soybeans (*Glycine max*) in 2019.	6802-1	24/07/2020
Plant health	*Enterobacter mori*	Bacterium	*Morus alba*	New research / new information: *Enterobacter mori* was previously described from *Morus alba* and has recently been isolated from kiwifruit showing wilting symptoms in southern China.	6829-1	28/07/2020
Plant health	*Pseudomonas brassicae*	Bacterium	*Brassica oleracea* var. *italica*	Newly described organism/taxon: A newly described bacterium *Pseudomonas brassicae* causing water soaking and head rot symptoms in *Brassica oleracea* var. *italica* (broccoli) has been described from Japan.	7087-1	18/09/2020
Plant health	*Pseudomonas syringae* pv. *actinidiae*	Bacterium	*Broussonetia papyrifera*	New host association: First report of the bacterium *Pseudomonas syringae* pv. *actinidiae* infecting *Broussonetia papyrifera* (paper mulberry) in China.	7198-1	23/10/2020
Plant health	*Ralstonia pseudosolanacearum*	Bacterium	*Bidens pilosa*	New host record: Different sequevars of *Ralstonia pseudosolanacearum* causing bacterial wilt of *Bidens pilosa* in China. Isolates from *B. pilosa* also displayed high virulence to *Eucalyptus* species.	6517-2	20/05/2020
Plant health	*Ralstonia solanacearum*	Bacterium	*Eucalyptus* spp. (gums)	New research: qPCR quantification of *Ralstonia solanacearum* (Burkholderiales; Burkholderiaceae) spread in susceptible and resistant *Eucalyptus* sp.	8305-1	12/06/2021
Plant health	*Ralstonia solanacearum*	Bacterium	*Solanum lycopersicum; Solanum melongena; Arachis hypogaea*	New research / new awareness: there is evidence to suggest *Ralstonia solanacearum* is seed transmitted in some hosts, such as *Solanum lycopersium* (tomato), S*olanum melongena* (epplant) and *Arachis hypogaea* (peanut).	5560-1	20/09/2019
Plant health	*Xanthomonas axonopodis* pv. *phaseoli* var. *fuscans*	Bacterium	*Phaseolus vulgaris*	Change in distribution: First report of *Xanthomonas citri* pv. *fuscans* in Belgium on bean plants (*Phaseolus vulgaris*).	6322-1	31/03/2020

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Alert #	Date added to ERS
Plant health	*Xanthomonas hortum* pv. *carotae*	Bacterium	*Daucus carota* (carrot)	New research / new awareness: Distribution of populations of *Xanthomonas hortorum* pv. *carotae*, that causes bacterial blight of *Daucus carota*, investigated in naturally-Infested carrot seed lots in USA.	6187-1	2/03/2020
Plant health	*Xanthomonas perforans*	Bacterium	*Eucalyptus pellita*	New host association: First report of *Xanthomonas perforans* causing leaf blight on a woody host, *Eucalyptus pellita* (red mahogany). The pathogen was found on nursery plants and young trees of *E. pellita* in Indonesia.	6444-1	5/05/2020
Plant health	*Xanthomonas perforans*	Bacterium	*Solanum lycopersicum; Capsicum annuum*	Other: Mexico has notified the WTO SPS of measures to manage *Xanthomonas perforans* on capsicums (*Capsicum annuum*) and tomato (*Solanumlycopersicum*) seeds originating in Brazil.	7256-1	29/10/2020
Plant health	*Cercospora foeniculi*	Fungus	*Foeniculum vulgare* (fennel)	New research/new awareness: Australian government now requires all consignments of *Foeniculum vulgare* (fennel) seed for sowing imported into Australia to be treated with a broad spectrum fungicide to manage the risk ofthe fungal pathogen *Cercospora foeniculi.*	7791-1	11/02/2021
Plant health	*Colletotrichum tropicale*	Fungus	*Origanum vulgare* (oregano)	New host association: first report of the anthracnose fungus *Colletotrichum tropicale* (Sordariomycetes: Glomerellales) infecting *Origanum vulgare* (oregano) in Mexico.	6343-1	10/04/2020
Plant health	*Colletotrichum tropicale*	Fungus	*Origanum vulgare* (oregano)	New host association: first report of the anthracnose fungus *Colletotrichum tropicale* (Sordariomycetes: Glomerellales) infecting *Origanum vulgare* (oregano) in Mexico.	6343-2	10/04/2020
Plant health	*Diaporthe angelicae*	Fungus	*Daucus carota* (carrot)	New research/new awareness: Australian government now require all consignments of *Daucus carota* (carrot) seed for sowing imported into Australia to be treated with a broad spectrum fungicide to manage the risk of the fungal pathogen *Diaporthe angelicae.*	7790-1	11/02/2021
Plant health	*Fusarium oxysporum* f.sp. *cannabis*	Fungus	*Cannabis sativa* (cannabis)	New reasearch/ awareness: Costa Rica have put measures in place for *Fusarium oxysporum* f.sp. *cannabis* on import of Cannabis seeds for sowing from all countries.	7361-1	2/09/2020
Plant health	*Fusarium oxysporum* f.sp. *vasinfectum*	Fungus	*Capsicum annuum*	Other: Mexico has notified the WTO SPS of measures to manage *Fusarium oxysporum* f.sp. *vasinfectum* (fusarium wilt) on capsicum (*Capsicum annuum*) seeds originating in Brazil.	7258-1	29/10/2020
Plant health	*Fusarium verticillioides*	Fungus	*Musa* sp.	Change in distribution: This alert is the first report of the fungus *Fusarium verticillioides* on bananas grown in Jordan.	6793-1	22/07/2020

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Alert #	Date added to ERS
Plant health	*Fusarium verticillioides*	Fungus	*Musa* sp.	Change in distribution: This alert is the first report of the fungus *Fusarium verticillioides* on bananas grown in Jordan.	6793-2	22/07/2020
Plant health	*Plasmopara halstedii*	Fungus	*AsteraceaeAgeratum houstonianum*	New host association: first record of the downy mildew *Plasmopara halstedii* on the ornamental plant *Ageratum houstonianum* (floss flower). Reported from Florida, USA.	5893-1	6/12/2019
Plant health	*Pseudocercospora exilis*	Fungus	*Brassica rapa* subsp. *parachinensis*	New host association: The first report of the fungus *Pseudocercospora exilis* infecting *Brassica rapa* subsp. *parachinensis* (Chinese flowering cabbage), in China.	6283-1	27/03/2020
Plant health	*Albugo candida*	Oomycete	*Brassica oleracea* var. *italica*	New research/New awareness: evidence to suggest that *Albugo candida*, causal agent of white blister rust in *Brassica* spp. may be seed tranmissible in broccoli (*Brassica olera*cea var. *italica*).	6633-1	19/06/2020
Plant health	*Peronospora aquilegiicola*	Oomycete	*Aquilegia* spp.	New country post border detection /incursion: First report of *Peronospora aquilegiicola* (downy mildew of columbines) in Germany. The oomycete was isolated from a plant sample of diseased *Aquilegia* sp. in a private garden.	6697-1	29/06/2020
Plant health	*Gene-edited plant germplasm*	Plant	n/a	New or change in pathway/commodity type:gene-edited Petunia (*Petunia* x *atkinsiana*) varieties and gene edited barley (*Hordeum vulgare*) varieties have been deemed non-GMO's by the USDA.	7047-1	4/09/2020
Plant health	*Gene-edited plant germplasm*	Plant	n/a	New or change in pathway/commodity type:gene-edited Petunia (*Petunia* x *atkinsiana*) varieties and gene edited barley (*Hordeum vulgare*) varieties have been deemed non-GMO's by the USDA.	7047-2	4/09/2020
Plant health	*Tomato chlorotic dwarf viroid* (TCDVd)	Viroid	*Petunia* sp.	Change in distribution/New host association: First report of *Tomato chlorotic dwarf viroid* isolated from symptomless petunia plants in Japan.	6156-1	25/02/2020
Plant health	*Apple stem grooving virus*	Virus	*Citrus* spp.*; Lilium* spp.*; Malus* spp.*; Pyrus* spp.*; Actinidia* spp.*; Nandina domestica; Prunus* spp.	New research/new awareness: A recent risk assessment suggests that *Apple stem grooving virus* may not be managed by existing measures on import pathways for host commodites.	6841-1	31/07/2020

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Alert #	Date added to ERS
Plant health	*Apple stem grooving virus*	Virus	*Citrus* spp.; *Lilium* spp.; *Malus* spp.; *Pyrus* spp.; *Actinidia* spp.; *Nandina domestica*; *Prunus* spp.	New research/new awareness: A recent risk assessment suggests that *Apple stem grooving virus* may not be managed by existing measures on import pathways for host commodites.	6841-2	31/07/2020
Plant health	*Banana bract mosaic virus* (BBrMV)	Virus	*Musa* sp.	New research / new awareness: Evidence of seed transmission of *Banana bract mosaic virus* (BBRV) in Musa synthetic diploid H-201 in India, a possible threat to banana breeding.	6438-1	30/04/2020
Plant health	*Bitter gourd yellow mosaic virus* (BgYMV)	Virus	*Momordica charantia*	New research / new awareness: The final Australian review of import conditions for cucurbitaceous seeds for sowing identified *Bitter gourd yellow mosaic virus* (BgYMV) as a quarantine pest.	6601-1	12/06/2020
Plant health	*Brassica campestris chinensis cryptic virus* (BCCV)	Virus	*Brassica rapa* subsp. *chinensis*	Newly described organism/taxon: New partitivirus, *Brassica campestris chinensis cryptic virus 1* (BCCV1), isolated from *Brassica rapa* in China.	8000-1	2/04/2021
Plant health	*Citrus leaf blotch virus* (CLBV)	Virus	*Morus alba*	New host association: First report of *Citrus leaf blotch virus* (CLBV) in *Morus alba*, in China.	7155-2	6/10/2020
Plant health	*Cowpea aphid borne mosaic virus* (CABMV)	Virus	*Arachis hypogaea; Vigna* spp.	Other: Concerns raised over whether *Arachis hypogea* and *Vigna* seeds for sowing are unmamaged pathways for *Cowpea aphid borne mosaic virus* (CABMV).	7757-1	4/02/2021
Plant health	*Cowpea aphid borne mosaic virus* (CABMV)	Virus	*Passiflora edulis*	New research/awareness: New phytosanitary requirements to import passionfruit plants (*Passiflora edulis*) of Taiwanese origin into Peru. Includes measures for *Cowpea aphid borne mosaic virus* (CABMV).	7386-1	20/11/2020
Plant health	*Cucumber fruit mottle mosaic virus* (CFMMV)	Virus	*Cucumis sativus; Cucumis melo; Cucurbita pepo*	New research / new awareness: The final Australian review of import conditions for cucurbitaceous seeds for sowing identified *Cucumber fruit mottle mosaic virus* (CFMMV) a quarantine pest.	6602-1	12/06/2020
Plant health	*Pepino mosaic virus* (PepMV)	Virus	*Solanum lycopersicum*	New country post border detection/incursion: First report of *Pepino mosaic virus* (PepMV) in commercial tomatoes (*Solanum lycopersicum*) crops in Israel.	6544-2	27/05/2020
Plant health	*Potato yellowing virus* (PYV)	Virus	*Solanum quitoense*	Change in distribution: First report of *Potato yellowing virus* (PYV) infecting *Solanum quitoense* (naranjilla) in Ecuador. Infected plants showed generalised chlorosis, interveinal yellowing or chlorotic areas and young leaf curling symptoms	6681-1	29/06/2020

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Alert #	Date added to ERS
Plant health	*Sweet potato chlorotic stunt virus* (SPCSV)	Virus	*Ipomoea batatas*	Change in distribution: First report of the crinivirus *Sweet potato chlorotic stunt virus* (SPCSV) in Taiwan.	6364-1	17/04/2020
Plant health	*Ti ringspot-associated virus* (TiRSaV)	Virus	*Prunus armeniaca; Prunus salicina*	New host association: First report of *Ti ringspot associated virus* (TiRSaV) on *Prunus armenica* × *salicina*—intercepted in PEQ from two plants from France.	8286-1	11/06/2021
Plant health	*Tobacco mild green mosaic virus* (TMGMV)	Virus	*Capsicum annuum*	New research / new awareness: Peru has notified the WTO of measures put in place for *Tobacco mild green mosaic virus* (TMGMV) on *Capsicum annum* seeds from China.	6850-1	5/08/2020
Plant health	*Tobacco mild green mosaic virus* (TMGMV)	Virus	*Capsicum annuum*	New research / new awareness: Peru has notified the WTO SPS of measures put in place for *Tobacco mild green mosaic virus* (TMGMV) on *Capsicum annum* seeds from China.	6850-2	5/08/2020
Plant health	*Tobacco mild green mosaic virus* (TMGMV)	Virus	*Capsicum annuum*	New research / new awareness: Peru has notified the WTO SPS of measures put in place for *Tobacco mild green mosaic virus* (TMGMV) on *Capsicum annum* seeds from China.	6850-3	5/08/2020
Plant health	*Tomato black ring virus* (TBRV)	Virus	*Solanum lycopersicum*	New research / new awareness: A recent scientific report from Czechia reports cultivar-dependent seed transmission of *Tomato black ring virus* (TBRV) in tomato (*Solanum lycopersicum*), at rates of between 1.7% and 14.6%.	7595-1	6/01/2021
Plant health	*Tomato mosaic virus*	Virus	*Solanum lycopersicum*	New country post-border detection/incursion: *Tomato mosaic virus* and *Tobacco vein distorting virus* affecting tomatoes (*Solanum lycopersicum*), first report in India.	6556-1	29/05/2020
Plant health	*Watermelon green mottle mosaic virus* (WGMMV)	Virus	*Lagenaria siceraria*; *Benincasa hispida*; *Cucurbita pepo*; *Cucumis sativus*; *Momordica charantia*	New host association and change in distribution: *Water melongreen mottle mosaic virus* (WGMMV) was found in *Lagenaria siceraria, Benincasa hispida, Cucurbita pepo, Cucumis sativus* and *Momordica charantia* in North America.	6987-1	31/08/2020

ACTIVE MONITORING SET UP TO INFORM ERS AS NEW INFORMATION BECOMES AVAILABLE

The potential risk is of no immediate concern but is worth monitoring for change—'active monitoring' has been set up.

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Animal health	*Glaesserella australis*	Bacterium	Suidae	New research/awareness: scientists from the University of Queensland found *Glaesserella australis* is behind the infection of lungs with lesions, abscesses and pleurisy in pigs in Australia.	6467	7/05/2020
Animal health	Chronic wasting disease (CWD)	Prion	Cervidae	Change in distribution: News item reporting that CWD (chronic wasting disease - prion affecting cervids) has spread to southwest Montana (USA), a prominent part of the greater Yellowstone ecosystem.	7542-5	13/12/2020
Animal health	*Canine circovirus*	Virus	*Canis lupus familiaris* (dog)	New research/awareness: A case of canine circovirus was reported by investigators of University of Connecticut in the *Journal of Veterinary Diagnostic Investigation*. This was the first case in a dog from the New England region of USA.	5697	21/10/2019
Plant health	*Acidovorax citrulli*	Bacterium	*Solanum lycopersicum*; *Solanum melongena*	Change in distribution / new host association: First report of *Acidovorax citrulli* on tomato (*Solanum lycopersicum*) seedlings in Greece.	7761-2	5/02/2021
Plant health	*Pantoea ananatis*	Bacterium	*Solanum lycopersicum*	New host association: First report of *Pantoea ananatis* isolated from tomato fruits (*Solanum lycopersicum*) and black nightshade (*Solanum nigrum*) seeds in Egypt.	8114	29/04/2021
Plant health	*Ralstonia solanacearum*	Bacterium	*Carica papaya*	New host association: *Ralstonia solanacearum* (bacterial wilt of potato) was isolated from wilted leaves of *Carica papaya* in Bangladesh.	8546	7/08/2021
Plant health	*Ralstonia solanacearum*	Bacterium	*Eucalyptus* spp.	New research: qPCR quantification of *Ralstonia solanacearum* (Burkholderiales; Burkholderiaceae) spread in susceptible and resistant *Eucalyptus* sp.	8305	12/06/2021
Plant health	*Xylella fastidiosa* subsp. *pauca*	Bacterium	*Ocimum basilicum* (sweet basil)	New host association: *Xylella fastidiosa* subsp. *pauca* artificially infected *Ocimum basilicum* (basil).	8372	28/06/2021
Plant health	*Alternaria jacinthicola*	Fungus	*Opuntia cochenillifera*	Change in distribution/new host association: The fungus *Alternaria jacinthicola* (Dothideomycetes: Pleosporales) was confirmed as the causitive agent for necrotic cladode spots in *Nopalea cochenillifera* (prickly pear) plants in Brazil.	7899	8/03/2021
Plant health	*Canariomyces microsporus*	Fungus	*Avena sativa*	New host association: First report of the fungus *Canariomyces microsporus* (Sordaimycetes: Microascales) in China with a new host record *Avena sativa* (oat).	8234	4/06/2021

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Plant health	*Ceratocystis paradoxa*	Fungus	*Phoenix dactylifera* (date palm)	New research / new awereness: Farmers made aware of black scorch caused by *Ceratocystis paradoxa* and *Thielaviopsis radicicola*, which is spreading in Oman on date palm (*Phoenix dactylifera*).	8531	6/08/2021
Plant health	*Diaporthe* sp.	Fungus	*Humulus lupulus* (hop)	Newly described organism/taxon: A new disease called halo blight caused by *Diaporthe* sp. 1-MI was reported on hops (*Humulus lupulus*) in Michigan.	8285	11/06/2021
Plant health	*Diaporthe tulliensis*	Fungus	*Parthenocissus tricuspidata*	New host association: First report of *Diaporthe tulliensis* (Sordariomycetes: Diaporthales) infecting *Parthenocissus tricuspidata* (Boston ivy) in Taiwan.	7999	2/04/2021
Plant health	*Diplodia bulgarica*	Fungus	*Malus domestica; Pyrus communis*	Change in distribution / new host association: First report of *Diplodia bulgarica* (Dothideomycetes: Botryosphaeriales) in Germany, occuring on apples (*Malus domestica*) and for the first time on pear (*Pyrus communis*).	8392	2/07/2021
Plant health	*Dysmicoccus nesophilus*	Insect	*Artocarpus altilis* (breadfruit)	New research / new awareness: The Australian IRA for breadfruit from Fiji, Tonga and Samoa (2019) identifies 11 quarantine pests requiring specific management measures, including the mealybug *Dysmicoccus nesophilus*.	5530-1	14/09/2019
Plant health	*Halyomorpha halys* (brown marmorated stink bug)	Insect	n/a	Other: The Australian government has added Poland to the list of countries targeted for seasonal measures against *Halyomorpha halys* (brown marmorated stink bug).	8370	26/06/2021
Plant health	'*Candidatus* Phytoplasma cynodontis'	Phytoplasma	*Brassica oleracea* var. *botrytis*	New Host Association: First report of '*Candidatus* Phytoplasma cynodontis' (Bermuda grass white leaf phytoplasma) associated with *Brassica oleracea* var. *botrytis* (cauliflower) in India.	8526	6/08/2021
Plant health	'*Candidatus* Phytoplasma dypsidis'	Phytoplasma	*Cocos nucifera; Archontophoenix alexandrae; Verschaffeltia splendida; Cyrtostachys renda; Phoenix* spp.	New described organism/taxon: New phytoplasma, '*Candidatus* Phytoplasma dypsidis' belonging to a new 16Sr group described from cultivated palm species in Australia.	8220	28/05/2021
Plant health	*Actinidia virus D*	Virus	*Actinidia chinensis*	Newly described organism: A novel *Actinidia* cytorhabdo virus characterised using genomic and viral protein interaction features.	8462	24/07/2021
Plant health	*Begonia flower breaking virus* (BFBV)	Virus	*Begonia* spp.	Change in distribution / new host association: First report of *Begonia flower breaking virus* (BFBV) infecting *Begonia (Begonia* spp.) in the United States.	8426	13/07/2021
Plant health	*Brassica campestris chinensis cryptic virus* (BCCV)	Virus	*Brassica rapa* subsp. *chinensis*	Newly described organism/taxon: New partitivirus, *Brassica campestris chinensis cryptic virus 1* (BCCV1), isolated from *Brassica rapa* in China.	8000	2/04/2021

ALERTS PASSED TO RISK MANAGERS FOR FURTHER EVALUATION

This table lists alerts that underwent risk assessment and were passed to risk managers to determine whether additional risk management measures are required.

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Aquatic health	Red sea bream iridoviral disease	Virus	Pomacentridae; *Amphiprion ocellaris*; Scorpaenidae	New host association: Discovery of red seabream iridovirus disease (RSIVD) infection in common clownfish (*Amphiprion ocellaris*) and red lionfish (*Pterois volitans)* held in quarantine in a marine aquarium facility, Missouri, USA.	5370	20/08/2019
Plant health	*Dickeya fangzhongdai*	Bacterium	*Colocasia esculenta*	New host association: First report of *Dickeya fangzhondai* infecting *Colocasia esculenta* (taro).	8139	7/05/2021
Plant health	*Ralstonia solanacearum*	Bacterium	*Carica papaya*	New host association: *Ralstonia solanacearum* (bacterial wilt of potato) was isolated from wilted leaves of *Carica papaya* in Bangladesh.	8546	7/08/2021
Plant health	*Ralstonia solanacearum*	Bacterium	*Eucalyptus* spp.	New research: qPCR quantification of *Ralstonia solanacearum* (Burkholderiales; Burkholderiaceae) spread in susceptible and resistant *Eucalyptus* sp.	8305	12/06/2021
Plant health	*Xylella fastidiosa*	Bacterium	Araucaceae; Athyriaceae; Violaceae; Corynocarpaceae; Dennstaedtiaceae; Haloragaceae	Other: Australian NPPO has implemented new emergency measures for nursery stock and tissue culture of *Araucariaceae, Argophyllaceae, Athyriaceae, Corynocarpaceae, Dennstaedtiaceae, Haloragaceae* and *Violaceae* against *Xylella fastidiosa* and related *Xylella* species.	8146	6/05/2021
Plant health	*Xylella fastidiosa* subsp. *fastidiosa*	Bacterium	*Psidium* spp.; *Ruta chalepensis*; *Vitis* spp.	New host association: Update of the *Xylella fastidiosa* subsp. *fastidiosa* host plants.	8357	24/06/2021
Plant health	*Xylella fastidiosa* subsp. *multiplex*	Bacterium	*Athyrium filix-femina*; *Callistemon citrinus*; *Clematis cirrhosa*; *Echium plantagineum*; *Lavatera cretica*; *Perovskia abrotanoides*	New host association: Update of the *Xylella fastidiosa* subsp. *multiplex* host plants.	8356	24/06/2021

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Plant health	*Colletotrichum orchidearum*	Fungus	*Anthurium andraeanum*	New research / new awareness: First report of spathe rot of *Anthurium andraeanum* var. Tropical Red, a tropical and subtropical ornamental flowering plant, caused by C*olletotrichum orchidearum.* Diseased specimens obtained from Kandy District, Central Province of Sri Lanka.	8611	23/08/2021
Plant health	*Diaporthe crousii*	Fungus	*Eucalyptus globulus*	New host association: First report of *Diaporthe crousii* infecting *Eucalyptus globulus* (Tasmanian bluegum) in Portugal.	7939	19/03/2021
Plant health	*Diaporthe malorum*	Fungus	*Eucalyptus globulus; Pinus pinaster*; *Quercus suber*	New host association: First report of *Diaporthe malorum* infecting *Eucalyptus globulus* (Tasmanian bluegum) in Portugal.	7938	19/03/2021
Plant health	*Diaporthe siamensis*	Fungus	*Citrus sinensis*	New host association / change in distribution: First report of *Diaporthe siamensis* infecting *Citrus sinensis* (sweet orange) in China.	8650	3/09/2021
Plant health	*Fusarium oxysporum* f.sp. *vasinfectum*	Fungus	*Cannabis sativa*	Other: Ecuador proposes fungicide treatment measures for *Fusarium oxysporum* f. sp. *vasinfectum* on *Cannabis sativa* seed for sowing. *F. oxysporum* f. sp. *vasinfectum* may not be managed by our standard.	7888	3/03/2021
Plant health	*Lasiodiplodia brasiliensis*	Fungus	*Musa* spp.	New awareness: *Lasiodiplodia brasiliensis* fungus detected for the first time at New Zealand border, on fresh produce bananas coming from Phillipines.	8210	24/05/2021
Plant health	*Lecanosticta acicola*	Fungus	*Pinus* spp.; *Cedrus libani*	Change in distribution / new host association: The fungus *Lecanosticta acicola* was identified as the causal agent of blight symptoms in *Pinus* sp. and *Cedrus* sp. in Turkey.	7982	29/03/2021
Plant health	*Macrophomina pseudophaseolina*	Fungus	*Ipomoea batatas*; *Arachis hypogaea*; *Parkinsonia aculeata*; *Abelmoschus esculentus*; *Gossypium hirsutum*; *Manihot esculenta*; *Ricinus communis*	Change in distribution: First report of the fungus *Macrophomina pseudophaseolina* (Dothideomycetes: Botryosphaeriales) in Australia on *Arachis hypogaea* (peanut) and *Parkinsonia aculeata*. The fungus was also found infecting *Ipomoea batatas* (sweet potato) for the first time.	8233	4/06/2021
Plant health	*Phyllosticta musarum*	Fungus	*Musa* spp.	Other: *Guignardia musae* (*Phyllosticta musarum*) is a plant pathogen that causes banana freckle, a disease that forms water-soaked lesions of banana fruit and is spread by rain splash.	8556	11/08/2021
Plant health	*Liriomyza huidobrensis*	Insect	Multiple	New country post-border detection /incursion: Australia published an International Plant Protection Convention (IPPC) notification on 30 July 2021 for an outbreak of serpentine leafminer *Liriomyza huidobrensis*.	8504	28/07/2021

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Plant health	*Liriomyza trifolii*	Insect	Multiple	New country post-border detection /incursion: Australia published an International Plant Protection Convention (IPPC) notification on 30 July 2021 for an outbreak of American serpentine leafminer *Liriomyza trifolii.*	8541	28/07/2021
Plant health	*Tuta absoluta*	Insect	Solanaceae; Amaranthaceae; Asteraceae; Brassicaceae; Convolvulaceae; Cucurbitaceae; Euphorbiaceae; Fabaceae; Geraniaceae; Malvaceae; Poaceae	New host association: Updated list of host plants of *Tuta absoluta* (Meyrick, 1917) (Lepidoptera: Gelechiidae) with reference to Romania.	7582	29/12/2020
Plant health	'*Candidatus* Phytoplasma aurantifolia' (SrII-V)	Phytoplasma	*Dianthus barbatus*	New host association: First report of a '*Candidatus* Phytoplasma aurantifolia'-related phytoplasma (16SrII-V subgroup) infecting cultivated *Dianthus barbatus* (sweet William) in Taiwan.	8166	14/05/2021
Plant health	'*Candidatus* Phytoplasma dypsidis'	Phytoplasma	*Cocos nucifera; Archonto phoenix alexandrae; Verschaffeltia splendida; Cyrtostachys renda; Phoenix* spp.	New described organism/taxon: New phytoplasma, '*Candidatus* Phytoplasma dypsidis' belonging to a new 16Sr group described from cultivated palm species in Australia.	8220	28/05/2021
Plant health	*Apple stem grooving virus*	Virus	*Paeonia* sp.	New host association: *Apple stem grooving virus* (ASGV) detected in a mixed infections on peony plants (*Paeonia* sp.) in China.	8376	30/06/2021
Plant health	*Brassica campestris chinensis cryptic virus* (BCCV)	Virus	*Brassica rapa* subsp. *chinensis*	Newly described organism/taxon: New partitivirus, *Brassica campestris chinensis cryptic virus 1* (BCCV1), isolated from *Brassica rapa* in China.	8000	2/04/2021
Plant health	*Potato yellowing virus* (PYV)	Virus	*Smallanthus sonchifolius*	New host association: In Bolivia, *Potato yellowing virus* (Ilarvirus, PYV) has been detected in *Smallanthus sonchifolius* for the first time.	8655	1/09/2021
Plant health	*Ti ringspot-associated virus* (TiRSaV)	Virus	*Prunus armeniaca; Prunus salicina*	New host association: First report of ti ringspot associated virus (TiRSaV) on *Prunus armenica* × *salicina* - intercepted in PEQ from two plants from France.	8286	11/06/2021

ALERTS PASSED TO RISK ANALYSTS FOR RISK ASSESSMENT AND CLOSED AFTER RISK ASSESSMENT

Alerts that have undergone initial screening and were passed to risk analysts for a more in-depth risk assessment and have been closed (because the risk is managed by current measures in relevant import health standards). Note: Some alerts closed at this stage may have outcomes of generated active monitoring or situational awareness for the border. Alerts that underwent risk assessment and were passed to a risk manager for further evaluation are presented in the table above.

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Animal health	*Corynebacterium pseudotuberculosis* (pigeon fever)	Bacterium	*Equus* spp. (horses)	New research/awareness: A quarter of the horses in Canada was confirmed to be infected with pigeon fever (*Corynebacterium pseudotuberculosis*).	7588	28/12/2020
Animal health	*Glaesserella australis*	Bacterium	Suidae	New research/awareness: Scientists from the University of Queensland found *Glaesserella australis* is behind the infection of lungs with lesions, abscesses and pleurisy in pigs in Australia.	6467	7/05/2020
Animal health	*Canine circovirus*	Virus	*Canis lupus familiaris* (dog)	New researcha/awareness: A case of canine circovirus was reported by investigators of University of Connecticut in the *Journal of Veterinary Diagnostic Investigation* in September 2019 edition. This was the first recorded case in a dog from New England region USA.	5697	21/10/2019
Plant health	*Brevipalpus yothersi*	Arachnid	*Citrus latifolia*	New research/awareness: *Brevipalpus yothersi* found on *Citrus latifolia* from Mexico.	8004	6/04/2021
Plant health	*Pantoea ananatis*	Bacterium	*Solanum lycopersicum*	New host association: First report of *Pantoea ananatis* isolated from tomato fruits (*Solanum lycopersicum*) and black nightshade (*Solanum nigrum*) seeds in Egypt.	8114	29/04/2021
Plant health	*Xylella fastidiosa subsp. pauca*	Bacterium	*Ocimum basilicum*	New host association: *Xylella fastidiosa* subsp. *pauca* found to artificially infect *Ocimum basilicum* (basil).	8372	28/06/2021
Plant health	*Canariomyces microsporus*	Fungus	*Avena sativa*	New host association: First report of the fungus *Canariomyces microsporus* (Sordaimycetes: Microascales) in China infecting *Avena sativa* (oats) for the first time.	8234	4/06/2021
Plant health	*Ceratocystis paradoxa*	Fungus	*Phoenix dactylifera*	New research/new awereness: Farmers made aware of black scorch caused by *Ceratocystis paradoxa* and *Thielaviopsis radicicola*, which is spreading in Oman on date palm (*Phoenix dactylifera*).	8531	6/08/2021
Plant health	*Diaporthe* sp.	Fungus	*Humulus lupulus*	Newly described organisms/taxon: A new disease called halo blight caused by *Diaporthe* sp. 1-MI was reported on hops (*Humulus lupulus*) in Michigan.	8285	11/06/2021
Plant health	*Diaporthe tulliensis*	Fungus	*Parthenocissus tricuspidata*	New host association: First report of *Diaporthe tulliensis* (Sordariomycetes: Diaporthales) infecting *Parthenocissus tricuspidata* (Boston ivy) in Taiwan.	7999	2/04/2021

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Plant health	*Diplodia bulgarica*	Fungus	*Malus domestica*; *Pyrus communis*	Change in distribution / new host association: First report of *Diplodia bulgarica* (Dothideomycetes: Botryosphaeriales) in Germany, occuring on apples (*Malus domestica*) and for the first time on pears (*Pyrus communis*).	8392	2/07/2021
Plant health	*Fusarium vorosii*	Fungus	*Triticum* sp.	Change in distribution: First report of *Fusarium vorosii* (Sordariomycetes: Hypocreales) in Serbia on *Triticum* sp. (wheat).	8508	30/07/2021
Plant health	*Lasiodiplodia laeliocattleyae*	Fungus	*Persea americana*	New host association: First report of *Lasiodiplodia laeliocattleyae* (Dothideomycetes: Botryosphaeriales) infecting *Persea americana* (avocado) in Peru.	8442	16/07/2021
Plant health	*Neoscytalidium hyalinum*	Fungus	*Citrus* spp.; *Citrus aurantiifolia*; *Citrus limetta*	Change in distribution: First report of *Neoscytalidium hyalinum* causing trunk disease of citrus in Iran.	8046	21/04/2021
Plant health	*Phaeoacremonium amygdalinum*	Fungus	*Prunus dulcis*	Change in distribution: First report of *Phaeoacremonium amygdalinum* associated with almond dieback and wood disease in Italy.	8333	18/06/2021
Plant health	*Phaeoacremonium iranianum*	Fungus	*Citrus reticulata*	New host association: First report of *Phaeoacremonium iranianum* causing trunk disease of citrus in Iran.	8048	21/04/2021
Plant health	*Phaeoacremonium italicum*	Fungus	*Citrus* spp.; *Citrus aurantiifolia*; *Citrus limetta*; *Citrus sinensis*; *Citrus reticulata*	New host association: First report of *Phaeoacremonium italicum* causing trunk disease of citrus in Iran.	8044	21/04/2021
Plant health	*Phaeoacremonium minimum*	Fungus	*Citrus aurantiifolia*	New host association: First report of *Phaeoacremonium minimum* causing trunk disease of citrus in Iran.	8040	20/04/2021
Plant health	*Phaeoacremonium parasiticum*	Fungus	*Citrus aurantiifolia; Citrus sinensis*	New host association: First report of *Phaeoacremonium parasiticum* causing trunk disease of citrus in Iran.	8041	20/04/2021
Plant health	*Delottococcus aberiae*	Insect	*Citrus sinensis; Citrus reticulata*	New research/awareness: *Delottococcus aberiae* found in orange plantations in Region of Murcia, Spain.	7917	15/03/2021
Plant health	*Halyomorpha halys* (brown marmorated stink bug)	Insect	n/a	Other: The Australian government has added Poland to the list of countries targeted for seasonal measures against *Halyomorpha halys* (brown marmorated stink bug).	8370	26/06/2021
Plant health	*Liriomyza chinensis*	Insect	*Allium* spp.	New host association: Two biotypes of *Liriomyza chinensis* has been found in *Allium spp*. fields in Japan.	7943	20/03/2021
Plant health	*Lopholeucaspis japonica*	Insect	*Lagerstroemia* spp.	Change in distribution: *Lopholeucaspis japonica* (Hemiptera: Diaspididae) recorded for the first time in the state of Texas, USA on *Lagerstroemia* spp.	7972	29/03/2021

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Plant health	*Monosteira unicostata*	Insect	*Populus alba*; *Salix babylonica*; *Jacaranda mimosifolia*; *Cupressus* spp.; *Quercus* spp.	New awareness: *Monosteira unicostata* infesting *Populus alba*, *Salix babylonica*, *Jacaranda mimosifolia*, *Cupressus* sp. and *Quercus* sp. plants in Chile.	7953	26/03/2021
Plant health	*Tuta absoluta*	Insect	*Solanum lycopersicum* (tomato)	New reserch: Insecticide resistance of field populations of *Tuta absoluta* on *Solanum lycopersicum* (tomato) in India.	8324	16/06/2021
Plant health	*Xylella fastidiosa* subsp. *multiplex*	Insect	*Prunus salicina*	New vector: *Macugonalia cavifrons* identified as a new vector of *Xylella fastidiosa* from a study done on *Prunus salicina* crops in Brazil.	8027	13/04/2021
Plant health	*Achatina fulica*	Mollusc	n/a	Other: Increased border interceptions of *Achatina fulica* (giant African land snail) on cargo entering Australia.	7937	18/03/2021
Plant health	'*Candidatus* Phytoplasma cynodontis'	Phytoplasma	*Brassica oleracea* var. *botrytis*	New host association: First report of the '*Candidatus* Phytoplasma cynodontis' associated with *Brassica oleracea* var. *botrytis* (cauliflower) in India.	8526	6/08/2021
Plant health	'*Candidatus* Phytoplasma fragariae'	Phytoplasma	*Ulmus* spp.; *Acer* spp.	New host association: '*Candidatus* Phytoplasma fragariae' was detected in non-symptomatic elm trees (*Ulmus* sp.) and one maple tree (*Acer* sp.) in Belgium.	6985	31/08/2020
Plant health	*Actinidia virus D*	Virus	*Actinidia chinensis*	Newly described organism: A novel *Actinidia* cytorhabdovirus characterised using genomic and viral protein interaction features.	8462	24/07/2021
Plant health	*Begonia flower breaking virus* (BFBV)	Virus	*Begonia* spp.	Change in distribution / new host association: First report of *Begonia flower breaking virus* (BFBV) infecting *Begonia* species in the United States.	8426	13/07/2021
Plant health	*Citrus tristeza virus* (CTV)	Virus	*Citrus* spp.	Change in distribution: *Citrus tristeza virus* was detected on citrus trees for the first time across the southern provinces in Laos.	8686	7/09/2021

ALERTS PASSED TO RISK ANALYSTS FOR RISK ASSESSMENT IN THIS REPORTING PERIOD AND AWAITING COMPLETION OF RISK ASSESSMENT

Alerts that have undergone initial screening and were passed to risk analysts for more in-depth risk assessment and are awaiting completion of risk assessment.

Field	Species/causative agent	Organism	Hosts identified in alert	Details	Tracking #	Date added to ERS
Aquatic health	*Aeromonas schubertii*	Bacterium	Penaeid shrimp	New research/awareness: *Aeromonas schubertii* found to cause mortality in penaeid shrimp in China.	8616	20/08/2021
Aquatic health	*Edwardsiella ictaluri*	Bacterium	*Pseudoplatystoma corruscans*	New host association: First record of susceptibility of Brazilian catfish *Pseudoplatystoma corruscans* (Pimelodidae) to *Edwardsiella ictalurid.*	8459	22/07/2021
Aquatic health	*Streptococcus agalactiae*	Bacterium	Tilapia fish species	New research/awareness: *Streptococcus agalactiae* linked to 2015 outbreak in tilapia fish in Singapore.	8362	24/06/2021
Aquatic health	Abalone viral ganglioneuritis (AVG)	Virus	n/a	Other: Measures undertaken to prevent introduction of abalone viral ganglioneuritis (AVG) into Western Australia.	8371	28/06/2021
Aquatic health	*Covert mortality nodavirus* (CMNV)	Virus	*Danio rerio* (zebrafish)	New research/awareness: Pathogenicity study of *Covert mortality nodavirus* (CMNV) infection in zebrafish (*Danio rerio*) model.	8638	26/08/2021
Plant health	*Alternaria burnsii*	Fungus	*Zea* spp.	New host association: *Alternaria burnsii* associated with leaf blight of maize (*Zea* spp.) in Heilongjiang Province, China.	8705	10/09/2021
Plant health	*Colletotrichum viniferum*	Fungus	*Vitis* spp.	Change in distribution: First report of *Colletotrichum viniferum* causing ripe rot of *Vitis* spp. in Taiwan.	8704	10/09/2021
Plant health	*Neoscytalidium novaehollandiae*	Fungus	*Salvia officinalis*	New host association: First report of the fungus *Neoscytalidium novaehollandiae* (Dothideomycetes: Botryosphaeriales) causing root rot and foliar blight on *Salvia officinalis* (sage) in Turkey.	8569	13/08/2021
Plant health	*Lychnis mottle virus* (LycMoV)	Virus	*Paeonia* sp.	Other: *Lychnis mottle virus* (LycMoV) detected in mixed infections on peony plants (*Paeonia sp.*) in China.	8381	30/06/2021
Plant health	*Tomato brown rugose fruit virus* (TBRFV)	Virus	*Solanum lycopersicum*	Change in distribution: *Tomato brown rugose fruit virus* (ToBRFV) detected in *Solanum lycopersicum* in Syria.	8702	10/09/2021

ALERTS CLOSED AFTER INITIAL SCREENING

Alerts considered not to represent a potential increase in risk to New Zealand after initial screening by the initial risk assessor. Individual alerts and alert details are not provided due to the volume of alerts screened.

Field	Reporting Period	Number of alerts screened and closed without further risk assessment
Animal health (risk to terrestrial animal health)	20 March – 20 September 2021	175
Aquatic health (risk to aquatic animal health)	20 March – 20 September 2021	59
Plant health (risk to plant health)	20 March – 20 September 2021	396