An introduction to some **unwanted foreign plant** and **animal pests** and **diseases**

The following cards identify some of our nation's higher biosecurity risks. Should any of these get across our border, they would be disruptive to individual businesses and sectors, the economy, our environment and even our way of life.

We all have a role in preventing pests and diseases from getting into New Zealand or helping stop their spread if they do get here.

Members of the Biosecurity Business Pledge asked for some simple visual cards that make it easy to identify a pest or disease along with what to do if you find them.

That's why the Biosecurity Business Pledge, in collaboration with Biosecurity New Zealand, produced these cards that you can use to build awareness in your workplace.

To find out more about the Biosecurity Business Pledge go to **www.thisisus.nz/biosecurity-business/biosecurity-business-pledge** or scan this QR code.

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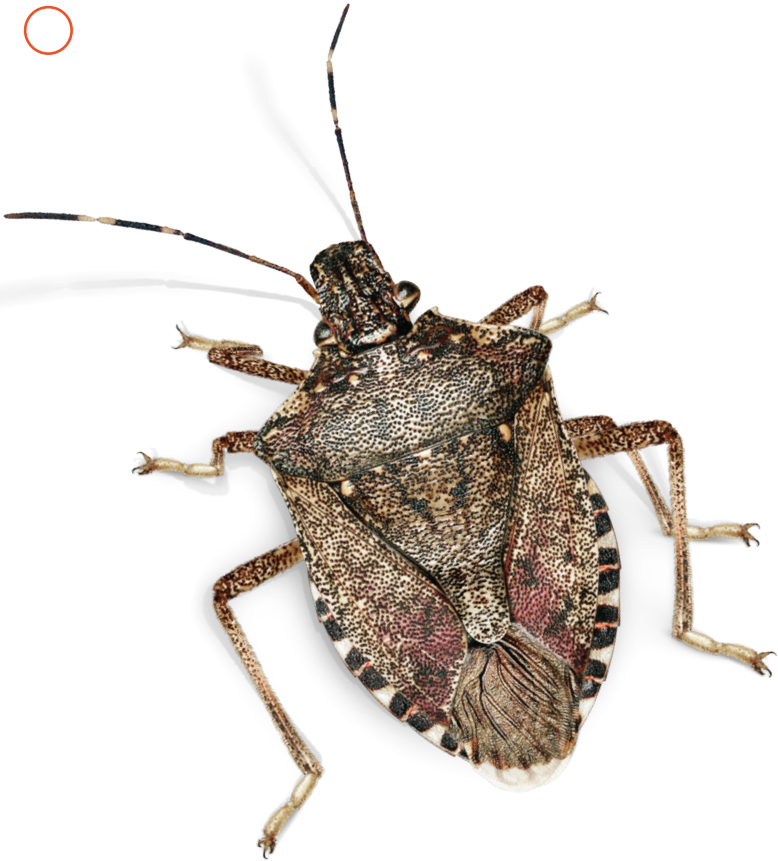
These information cards were made in collaboration with Biosecurity New Zealand and Biosecurity Business Pledge members. The information contained was correct at 1 December 2023.



BROWN MARMORATED STINK BUG (BMSB)

DESCRIPTION

- Adult BMSB are a brown “shield” shape and about the size of a 10 cent coin.
- The easiest way to identify them is from the white bands on their antennae and alternating black and white markings on the abdomen. Its underside is a white/tan colour.
- Stink bug eggs are light green, shaped like barrels, and are usually in clusters of 20 to 30.

BROWN MARMORATED STINK BUG

IMPACTS

BMSB threatens our economy as they attack a wide range of crops. They are also a household pest who invade homes and sheds in mass numbers.

HOW IT SPREADS

BMSB can hitchhike in luggage and deliveries. They can hide in cracks and crevices in imported goods, and in passengers luggage.

We do not have brown marmorated stinkbug in New Zealand and want to keep it that way.

If you think you’ve found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

QUEENSLAND FRUIT FLY (QFF)

DESCRIPTION

- Adult flies are 6mm to 8 mm long (a little larger than a house fly).
- Are reddish-brown with distinct yellow markings and have clear wings.
- The female fly has a pointed “sting” (its ovipositor) at the end of her body.
- We’re most at risk from this pest during the Australian growing season (New Zealand’s summer months).

IMPACTS

The adult fly lays its eggs in fruit and vegetables. When the maggots hatch they eat the fruit and vegetables, causing it to rot.

The maggots eat over 200 different types of fruit and vegetables. Their favourites are guava, stonefruit, tomatoes, and mango. Even if just one or two flies arrived in New Zealand, it could cause problems with our trading partners.

HOW IT SPREADS

Queensland fruit fly could only get to New Zealand in fruit infested with eggs or maggots. Biosecurity New Zealand has strict measures in place to limit the chances of the fly establishing in New Zealand.

Whenever travelling to New Zealand, always declare declare any fruit and vegetables in your luggage.

QUEENSLAND FRUIT FLY

We do not have Queensland fruit fly in New Zealand and want to keep it that way.

If you think you’ve found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

FOOT AND MOUTH DISEASE (FMD)

DESCRIPTION

- Foot and mouth disease (FMD) is a highly contagious viral disease that only infects cloven-hooved animals (its foot is divided in two). In New Zealand this includes cattle, pigs, sheep, goats, deer, alpaca and llama. FMD does not infect humans and is not considered a risk to human health or food safety.
- There have been no cases of FMD in New Zealand. However, it is the most significant disease risk to world trade in animal products and is the single biggest threat to New Zealand's livestock industries.

IMPACTS

If New Zealand had an outbreak of FMD, there would be an immediate halt to live animal exports and animal products from cloven-hooved animals. An All-of-Government response would aim to regain New Zealand's 'FMD-free without vaccination' status and recover trade as soon as feasible. This could take many months, resulting in significant financial, social, environmental and welfare impacts. FMD can be very painful for infected animals.

HOW IT SPREADS

FMD can be spread through direct contact between infected and susceptible animals, when infected meat is fed to susceptible animals, by objects or people that come into contact with infected animals, by wind or water. Infected animals can spread the virus through breath and saliva, meat and milk, manure or other waste products, semen or blood contamination of mud or soil by hooves.

FOOT AND MOUTH DISEASE

We do not have FMD in New Zealand and want to keep it that way.

If you think you've seen a case of FMD disease call your vet immediately or contact Biosecurity New Zealand on

0800 80 99 66

LUMPY SKIN DISEASE (LSD)

Archives of Virology

Dr Deepak Subedi

DESCRIPTION

- Lumpy skin disease (LSD) is a viral disease that affects cattle only. It is transmitted mainly by blood-feeding arthropods (such as certain species of flies, mosquitoes and ticks) but can also be transmitted by direct contact.
- New Zealand has never had LSD. It is endemic in most of Africa, parts of the Middle East and Turkey and has been spreading across Asia since 2019.
- LSD does not pose human health concerns.

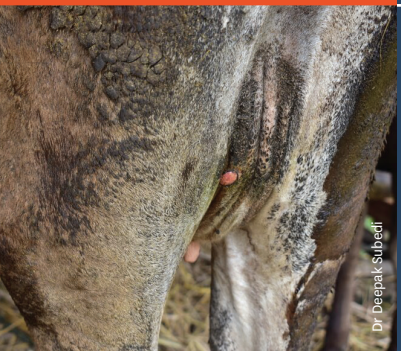
IMPACTS

It causes fever, nodules on the skin and causes relatively low mortality, however the disease can result in animal welfare issues and significant production losses.
If LSD was detected in New Zealand, it would impact our beef cattle and dairy industry domestic and international trade as New Zealand would no longer be recognised as being free from LSD.
This would result in economic losses to associated industries including meat processing, retailers and livestock transporters.

HOW IT SPREADS

Lumpy skin disease is carried by live animals and reproductive material. It can also be transmitted by contaminated equipment and biting insects or parasites, such as flies, mosquitoes and ticks.

LUMPY SKIN DISEASE



Dr Deepak Subedi

We do not have LSD in New Zealand and want to keep it that way.

Report any sightings of LSD to the Biosecurity New Zealand hotline

0800 80 99 66

Pest and Diseases Image Library, Bugwood.org

SPOTTED LANTERNFLY

US Department of Agriculture

DESCRIPTION

- Adults are about 2.5 cm long and 1.2 cm wide.
- Look for the eggs and adult flies in vineyards, orchards or garden.

IMPACTS

Damages at least 70 plant species including pipfruit, stonefruit, kiwifruit & grapes.

HOW IT SPREADS

The spotted lanternfly lays its eggs in clusters on smooth vertical surfaces and covers them with a protective layer of wax. These smooth surfaces can include vehicles and machinery, shipping containers, and garden furniture.

Spotted lanternfly eggs could "hitchhike" on these and other commodities imported into New Zealand.

SPOTTED LANTERNFLY

We do not have spotted lanternfly in New Zealand and want to keep it that way.

If you think you've found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

Female spongy moth

SPONGY MOTH

Male spongy moth

DESCRIPTION

- The egg masses are covered with fine hairs that are light brown or tan. They are oval and can range in size, up to 4cm by 2cm.

Creamy coloured mass of eggs covered in hairs on a tree.

IMPACTS

Spongy moth caterpillars can strip leaves from entire trees, devastating stands of trees.
In large numbers, the caterpillars are a public nuisance. They leave large amounts of droppings and have tiny stinging hairs that cause an itchy or painful rash.

HOW IT SPREADS

Female spongy moths can fly between 1km and 10km. They lay their eggs on all kinds of surfaces, like tree trunks, rocks, buildings, fences, vehicles, shipping containers, and ships. Vehicles and ships are the most likely ways for the egg masses to arrive in New Zealand. Biosecurity New Zealand has strict measures in place to limit the chances of spongy moths spongy moths establishing in New Zealand.

SPONGY MOTH

Jon Yuschock, Bugwood.org

We do not have spongy moth in New Zealand and want to keep it that way.

If you think you've found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

RED IMPORTED FIRE ANT (RIFA)

DESCRIPTION

- The RIFA worker ants vary greatly in size, ranging from 2mm to 6mm long. Mostly, the RIFA builds nests in the open. The nest looks like a raised mound of soil, up to 40cm high and 46cm wide. No ants in New Zealand build nests like these.
- They are aggressive and, unlike native ants, will swarm towards anyone or anything that disturbs their nest. They move quickly, particularly when it's warm.

IMPACTS

The ants' painful sting can make harvesting crops impossible. Farmers may need to remove livestock from places infested with RIFA. Farm equipment can be damaged if a farmer drives over a nest.

They can 'farm' other pests, like aphids and mealy bugs, for their honeydew. Excess honeydew can cause black mould, damaging plants. RIFA also eat seeds and may attack fruit. They can eat young shoots and roots of plants.

RED IMPORTED FIRE ANT

They can prey on birds, lizards, and small mammals. They also compete with native lizards, birds, and insects for food. If RIFA became established in New Zealand, this could impact our way of life.

The RIFA delivers a painful sting. Some people can have a severe allergic reaction to the sting and can even die.

HOW IT SPREADS

The RIFA is a hitchhiker species. They only need enough room for a queen and a few workers. They can hide in vehicles, shipping containers, machinery, anything with a crevice.

Biosecurity New Zealand has strict measures in place to limit the chances of RIFA establishing in New Zealand.

We do not have RIFA in New Zealand and want to keep it that way.

If you think you've found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

GIANT AFRICAN SNAIL (GAS)

DESCRIPTION

- The Giant African snail is a tropical snail, but can survive cold conditions, even snow, by hibernating. Key identifying characteristics include:
  SHELL LENGTH: usually 5 to 10 cm, but can be up to 20 cm long;
  SHELL COLOUR: most commonly light brown, with alternating brown and cream bands on young snails and the upper whorls of larger specimens;
  SHELL SHAPE: long, narrow and Conical.

IMPACTS

If the GAS became established here, it would pose a serious threat to agriculture, native species and human health. It is a voracious herbivore, consuming large volumes of both native and cultured plants.
The snail can also act as a vector of human disease.

HOW IT SPREADS

The GAS could hitchhike its way here by attaching itself to plant material, crates, containers, machinery or motor vehicles.
It can hide out of general sight and eggs may be found in soil. Airport interceptions are also made as travellers bring in the delicacy to satisfy expatriates with a meal from home! Containers and cargo from high-risk GAS infested countries are inspected on arrival.

GIANT AFRICAN SNAIL

We do not have Giant African snail in New Zealand and want to keep it that way.

If you think you've found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

PINE PITCH CANKER

DESCRIPTION

- The Pine Pitch Canker is a disease caused by a fungus.
- The wood under affected bark is amber-coloured and resin-soaked.
- Branches die back, leaving brown needles.

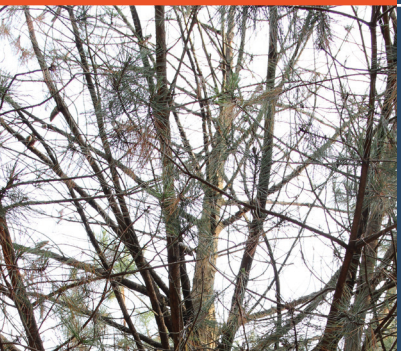
IMPACTS

This fungus causes dieback in pine trees, including radiata pine, which is central to our forestry industry. The disease can kill seedlings and cause adult trees to lose their entire canopy.

HOW IT SPREADS

Contaminated seeds are the most likely way this fungus could arrive in New Zealand. Biosecurity New Zealand has strict measures in place to limit the chances of Pine Pitch Canker making it through the border.

PINE PITCH CANKER



We do not have Pine Pitch Canker in New Zealand and want to keep it that way.

Report suspected cases. If you've found unusual dieback in pines, photograph it, note location and any landmarks and call Biosecurity New Zealand on

0800 80 99 66

CITRUS LONGHORN BEETLE

Pest and Diseases Image Library , Bugwood.org

DESCRIPTION

- The beetle – both males and females are black and shiny with white to blue spots. Males are about 21mm long and females are about 37mm long.
- Eggs are found singly under bark and are about 6mm long.
- The larva is cylindrical, about 56mm long, 10mm wide (at its widest), without obvious legs, pale yellowish white with a dark head.
- Pupae have long coiled antennae, have legs and are found under bark.

IMPACTS

The Citrus Longhorn beetle feeds on over 100 different host plants, in particular orchard species, like apples and pears. The damage done in orchards can cause serious economic losses, including a decrease in the amount of fruit grown.
The beetle also feeds on many trees found in urban landscapes, such as alders and plane trees.

The larvae tunnel under the bark, weakening the trees and making them susceptible to disease and wind damage. Young trees are less able to withstand the beetle's damage.

HOW IT SPREADS

The eggs, larvae, and pupae (the dormant stage before adulthood) could arrive on nursery stock, wood products, or wooden packaging. Biosecurity New Zealand has strict measures in place to limit the chances of the beetle establishing in New Zealand.

CITRUS LONGHORN BEETLE

Wikimedia commons

We do not have Citrus Longhorn beetle in New Zealand and want to keep it that way.

If you think you've found this exotic pest, capture it, take a photo and call Biosecurity New Zealand immediately on

0800 80 99 66

AFRICAN SWINE FEVER (ASF)

DESCRIPTION

- African swine fever (ASF) is a highly contagious viral disease of domestic and wild pigs.
- It doesn't affect humans or any other animals.
- The clinical signs of ASF range from mild to severe depending on the strain of the virus. With the sever form, mortality rate can reach 100%. Less sever forms may result in milder clinical signs.

IMPACTS

ASF is a devastating, deadly disease that would have a significant impact on livestock producers, communities and the economy if it were found here. Symptoms of highly virulent virus ASF can be sudden death, fever, lesions, vomiting, diarrhoea, abortions, eye discharge, anorexia and more.

HOW IT SPREADS

ASF is spread within domestic pig populations primarily through contact with infected pigs' bodily fluids and excretions, movement of people or objects that have been in contact with infected pigs and feeding of contaminated swill.

AFRICAN SWINE FEVER

We do not have ASF in New Zealand and want to keep it that way. **If you think you've seen a case of ASF, isolate the animal immediately and do not move it off your property. Call your veterinarian, or contact the Biosecurity New Zealand pest and disease hotline on**

0800 80 99 66

HIGH PATHOGENICITY AVIAN INFLUENZA (HPAI)

DESCRIPTION

- High Pathogenicity Avian Influenza (HPAI), like H5N1, is a contagious viral disease that is currently circulating globally and can have a high mortality rate in both domestic and wild birds. New Zealand has never had a case of HPAI. Avian influenza signs vary, but with HPAI, the most obvious sign is several dead birds within a group or flock. HPAI has also been detected overseas in a variety of non-avian species, such as cats, pigs, dogs, cats, marine mammals and humans.

IMPACTS

If HPAI arrived in New Zealand, it could harm a variety of bird species, including poultry flocks and wildlife.
Avian influenza is a zoonotic disease, which means there is the possibility it can spread between animals and to people.
The disease could impact negatively on or poses risks to trade, food production, native biodiversity, and human health.

HOW IT SPREADS

HPAI is mainly spread through migratory birds across large geographic regions and by direct contact between infected and healthy birds.
The spread of infection from bird to mammal can occur through mammals coming into contact with secretions and/or excretions from infected animals, being in direct contact with infected birds, being fed or eating infected birds.
It can also be transmitted through contaminated equipment or materials (including water and feed).

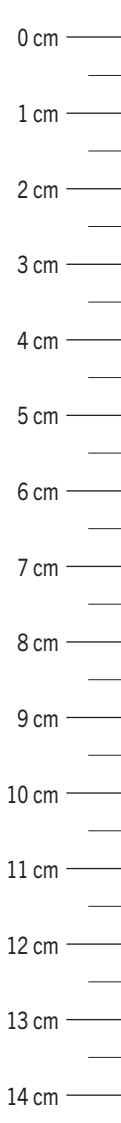
HIGH PATHOGENICITY AVIAN INFLUENZA

We do not have HPAI in New Zealand and we want to keep it that way.

If three or more birds in a group are sick or dying, contact the Biosecurity New Zealand pest and disease hotline on

0800 80 99 66

Sick or dead birds should not be handled. Our investigators will advise you on what action to take.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BIOSECURITY BUSINESS PLEDGE

It takes all of us to protect what we've got

Ko Tātou

This Is Us BIOSECURITY 2025

December 2023