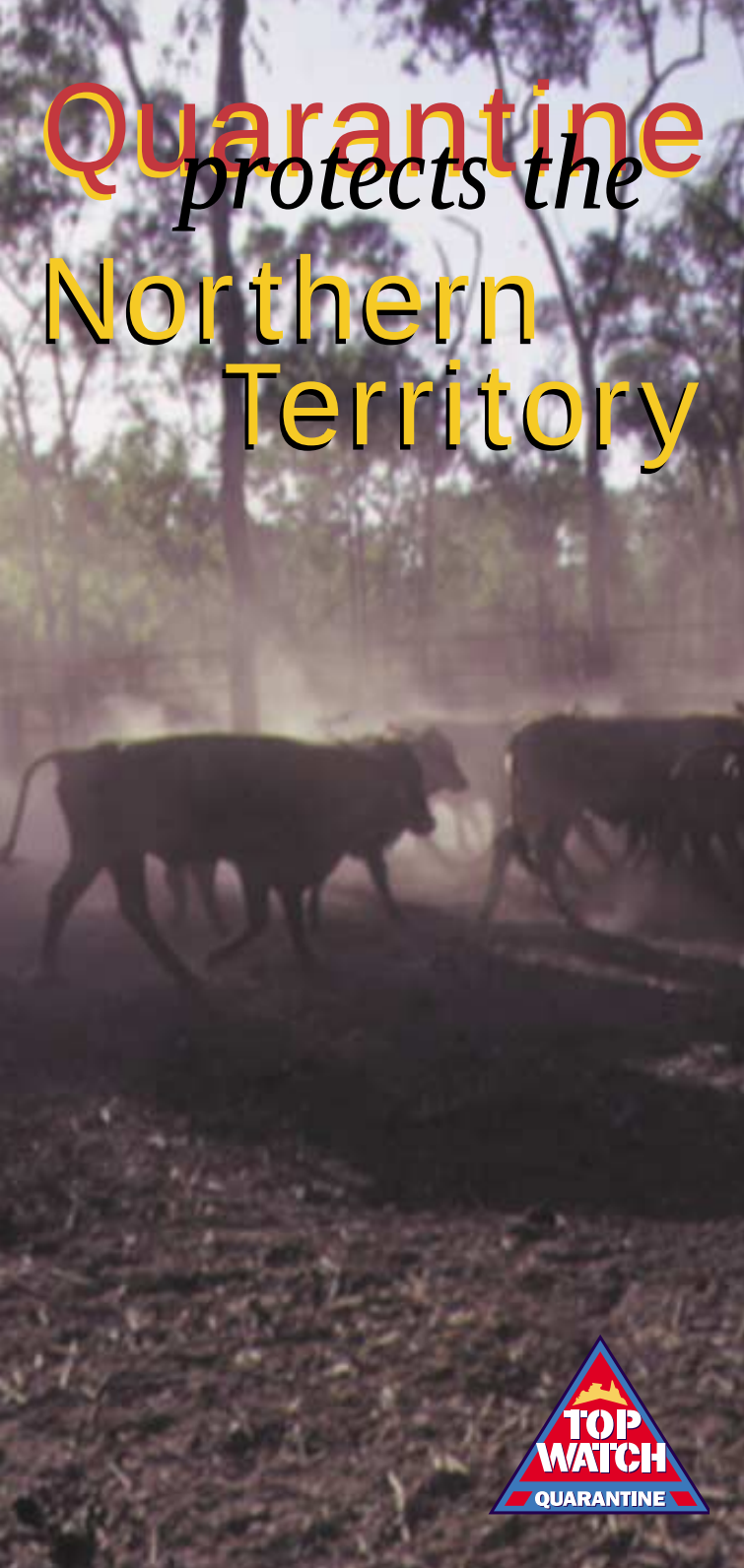
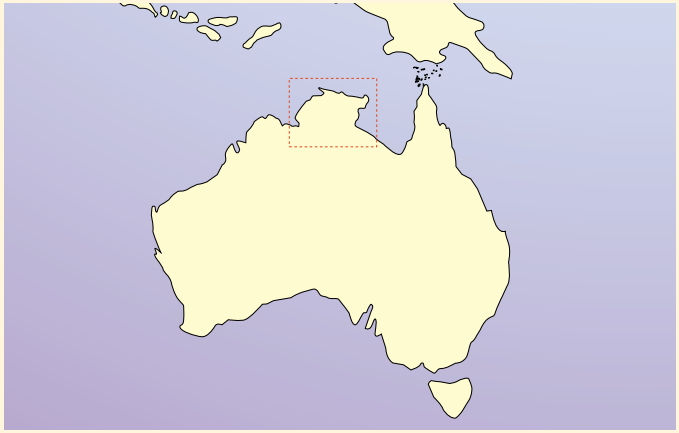
Quarantine *protects the* Northern Territory





Australia is free of many of the major agricultural pests, diseases and weeds which are present in South East Asia and some Pacific countries. Their introduction into Australia could devastate plant and animal industries and would severely affect our way of life.

The Australian Quarantine and Inspection Service (AQIS) is responsible for keeping exotic pests, diseases and weeds out of Australia. All Australians and visitors to Australia are encouraged to help protect our environment and agricultural and livestock industries by reporting pest or disease outbreaks to Quarantine.

AQIS has developed the Northern Australia Quarantine Strategy (NAQS) in recognition of the unique quarantine situation presented in this part of the country. NAQS is designed to protect northern Australia from Broome to Cairns, including the Torres Strait, from the entry of harmful pests, diseases and weeds. An important part of the strategy is an early warning system that alerts AQIS and other agencies to the arrival of exotic pests, diseases and weeds through monitoring and surveillance including insect traps and sentinel cattle, pigs and bees.

Top Watch is the quarantine awareness campaign designed for northern Australia. Top Watch encourages reporting of unusual pest or disease incidents and aims to create an awareness of quarantine among remote communities and areas of northern Australia.

Pests, diseases and weeds

The coastal regions of the Northern Territory are vulnerable to pests and diseases through increased tourist activity, foreign fishing and refugee vessels and the closeness of our northern neighbours. Pests and diseases can enter the Northern Territory from Asia or Papua New Guinea. If you see any of these pests, diseases or weeds, contact your nearest Quarantine office.

Asian honey bee

This is the bee that arrived in Darwin in 1998. An eradication program is underway. Asian honey bees carry tiny mites that can kill our European honey bees, potentially destroying commercial honey production in Australia as well as crops that rely on bee pollination.

The Asian honey bee looks very similar to the European honey bee but different to native bees. They nest in hollow trees and buildings and could arrive as a swarm on a boat.

Banana skipper

Originally from South East Asia, the banana skipper butterfly is a major pest of banana plants. Larvae (caterpillars) commence feeding at the edge of the leaf and construct a leaf shelter by rolling the edge of the leaf. Inside this leaf roll, which is an obvious sign of infestation, the larva secretes a protective, white, waxy powder around itself. As few as three larvae on a leaf can strip the entire leaf back to its midribs.

Melon fly

The melon fly favours cucumbers, gourd, pumpkin, squash, beans, watermelon and tomatoes. Infested fruit and vegetables will often have small spots on their skin. They may look healthy on the outside, but be rotten inside with the fruit fly maggot.

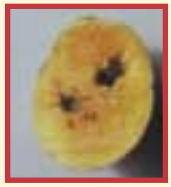
Siam weed

Siam weed invades crops, plantations and pastures stopping young trees and other plants from growing. In the dry season, the stems of the weed are also a serious fire hazard. It forms tall, thick bushes several metres tall and can climb trees. The weed can be identified by masses of small white or pale lilac flowers that appear in the dry season. Small seeds are carried in the wind or can become attached to clothing.

Red banded mango caterpillar

This pest is common in Indonesia and Papua New Guinea and has been detected in the Torres Strait. It can ruin mango crops. The caterpillar can live undetected in the fruit and destroy the mango from the inside out. Stains on the skin of the mango from sap flow are a common sign of infestation. As the name suggests, the older caterpillars have distinctive red stripes across the body.

Mango pulp weevil

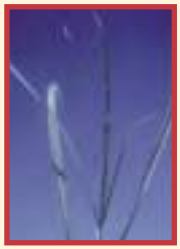


The mango pulp weevil is similar to the mango seed weevil which is already in the Northern Territory, but it tends to live in the pulp of the mango rather than the seed. It is difficult to know if a mango is infested until you cut it open. Infested fruit is inedible and larvae can often be seen in the fruit's flesh where they form distinctive brown chambers up to one centimetre in diameter.

Papaya fruit fly

The papaya fruit fly is prevalent in Papua New Guinea and Indonesia and has been found in the Torres Strait where there is an intensive program of monitoring and control in place. It was recently eradicated from Cairns. This is a very serious fruit fly pest which attacks a wide range of fruits. Fruits become infested at an earlier stage than with most other fruit fly species. Fruit fly maggots feed inside the fruit, which then becomes rotten. Papaya fruit fly can affect the trade of many fresh fruit and vegetables. The closely related Filipino fruit fly was eradicated from Darwin in 1998 but locals will not forget the restrictions on movement of fruit out of Darwin caused by the presence of this fly.

Sugarcane smut

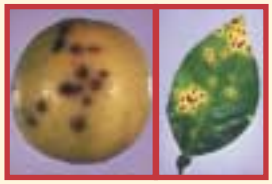


Sugarcane smut is a fungus that affects sugarcane plants and can cause serious economic losses. The first sign of infestation is a shortening and crinkling of the leaves. Another tell tale sign is a black whip-like structure which bears masses of spores. This disease was recently found in Kununurra, where quarantines have been put in place and is thought to have arrived on the wind from Indonesia.

Sugarcane borer

There are a number of different types of sugarcane borers but they are all caterpillars that bore inside sugarcane stalks destroying the heart of young seedlings, breaking stalks and reducing the amount of sugar the plant can produce. The adult borer (a moth) lays its eggs on the underside of green or dry leaves. Bore-holes in the stalks and stems are also a clear sign of infestation. There are no sugarcane borers currently in Northern Territory.

Citrus canker



This bacterial disease can cause great losses to the citrus industry. The disease can affect the trade of citrus fruit. Rusty-brown spots form on the leaves, shoots and fruit, making them unsightly. Older spots on leaves become surrounded by a water soaked margin and a yellow halo. This disease is common in Indonesia and Papua New Guinea and was eradicated from the Northern Territory in 1995.

Mile-a-minute

Mile-a-minute is a thin-stemmed vine with many branches and spade-shaped leaves and a pungent smell. The vine smothers other plants and is a major weed of crops and pastures. As well as strangling its hosts, it affects soil quality. Its seeds are spread by wind and its creeping stems also root when they come into contact with soil.

Japanese encephalitis

Japanese encephalitis (JE) is a potentially fatal viral disease of humans and horses. The primary hosts of the virus are wild water birds and pigs. Humans can contract the disease from infected mosquitoes which have recently bitten an infected pig. Symptoms in people can include fever, severe headaches, muscle pain, nausea, disorientation and coma. NAQS bleeds sentinel pigs to test for JE at key locations throughout northern Australia.

Screw-worm fly

The screw-worm fly is a blowfly which occurs in all tropical countries except Australia. The fly is different to other blowflys because it lays its eggs on the edge of any wound on a warm-blooded animal including humans. The eggs hatch into maggots which crawl into the wound, infesting it and feeding on the animal. The wound is continuously enlarged by the action of the maggots and weeps serum attracting more screw-worm flies. Animals can die due to loss of tissue fluid and infection. Check fly struck animals and send maggots to your nearest Quarantine inspector or veterinarian. Maggot collection kits are available from all Quarantine Offices.

Inspecting a screw-worm fly trap

Working together

AQIS works cooperatively with the NT Department of Primary Industries and Fisheries, NT Parks and Wildlife Commission, Aboriginal Land Councils and local producer groups to ensure northern Australia remains protected from serious pests and diseases.

Early warning

NAQS early warning system includes a network of sentinel cattle herds, pigs and insect traps which are located at key sites from Broome in Western Australia to Cairns in Queensland and including the Torres Strait. Sentinel animals are regularly bled for early warning of diseases such as Japanese encephalitis, surra and bluetongue. Insect traps are cleared every month – and every fortnight in the wet season – for early warning of exotic fruit flies, biting midges and screw-worm fly. In addition, NAQS scientists regularly survey risk areas across northern Australia for any signs of new animal or plant pests, diseases or weeds. NAQS scientists also carry out collaborative survey and monitoring activities in neighbouring Papua New Guinea and Indonesia.

The effectiveness of the early warning system also depends on the active cooperation of people such as pastoralists and members of Aboriginal communities who live and work in remote areas and may notice weeds and unusual animal and plant diseases.

Bleeding cattle

Indigenous communities, horticulturists and pastoralists can keep a top watch

All people living in the coastal areas of northern Australia whose livelihood depends on keeping crops and livestock free of exotic pests and diseases have an important part to play in the Quarantine Top Watch.

Pastoralists can help keep watch for screw-worm fly by using a screw-worm fly maggot kit distributed by AQIS. Contact your local Quarantine office to obtain a kit.

Pests and diseases which are present in neighbouring countries could seriously harm Australia's rural industries and the traditional lifestyle of Aboriginal people by damaging bush tucker, access to traditional lands and restricting movement of plants and animal products.

You can help keep a Quarantine Top Watch by reporting to your local Quarantine office:

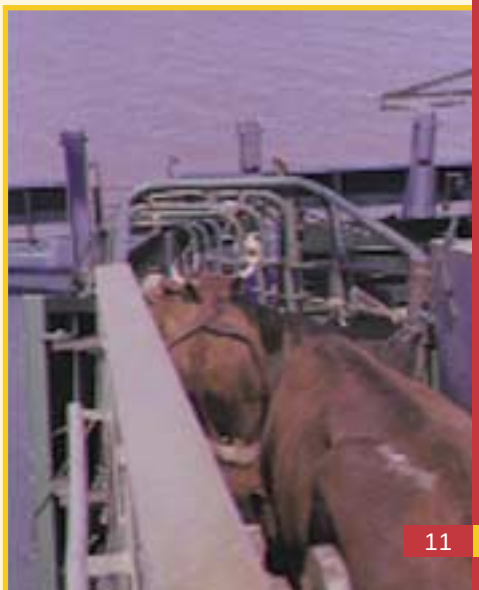
- any signs of unusual plant pests or diseases;
- damage to quarantine insect traps;
- any suspicious or illegal activity;
- strange animal behaviour and increased death rates;
- unusual markings on the leaves or fruit of trees and food plants;
- an increase in the number of insects and insects not normally seen in your area; and
- the arrival of yachts and fishing boats from overseas.

Scientific surveys

Because many of the exotic pests, diseases and weeds are difficult to recognise, NAQS scientists regularly survey risk areas of northern Australia for introduced animal and plant pests, diseases and weeds. While on survey, scientists and field staff also promote an awareness of quarantine among remote communities and industry groups.

Overseas activities

Australia, Indonesia and Papua New Guinea have agreed to cooperate in quarantine matters. NAQS scientists regularly visit neighbouring countries to collect and exchange information on pests and diseases and to resolve matters of mutual concern. In both Indonesia and Papua New Guinea, NAQS sponsors a program of agricultural pest and disease monitoring. NAQS scientists also carry out regular surveys for quarantine pests in collaboration with their counterparts in Papua New Guinea and Indonesia. The information obtained in this way is used by AQIS and Australia's rural industries to assess quarantine risks.



Keep watch as you fish

The movement of people and vessels throughout the coastal areas of the Northern Territory could bring unwanted pests, diseases and weeds but you can help keep our environment free from these problems:

- if you see plants, fruit, vegetables or animals (including pets) being taken ashore from foreign fishing vessels, contact Quarantine;
- don't trade foodstuffs with foreign vessels;
- dispose of garbage properly;
- always report landings of foreign vessels in remote areas;
- report the discharge of ballast by overseas registered vessels in Australian waters; and
- if you see a suspicious incident, contact Coastwatch or your local Quarantine office.

All fishing vessels arriving from overseas must receive quarantine clearance at the approved ports of entry: Cairns, Thursday Island, Broome, Nhulunbuy and Darwin. All live animals on board are a quarantine risk and must be declared.

Fresh and tinned meat, salami, eggs, dairy and other animal products are potential carriers of viruses including foot and mouth, Newcastle disease and African swine fever. Foot and mouth disease and African swine fever can last in chilled or frozen meat for up to a year or more. Plants, seeds, fruit, vegetables or timber products could also carry insect pests and diseases.

Yachts ahoy!

If you have an animal on board, you will be required to confine it and enter into a bond that it will not escape. You will be permitted to moor in mid-water only. The animal must not be allowed to come ashore or into contact with Australian animals including birds. Should this happen, your bond could be forfeited and the animal destroyed.

Cruising yachts can keep Australia pest free

- proceed directly to a first port of entry after entering Australian waters;
- identify yourself to Coastwatch aircraft;
- keep all foodstuffs and animals secure until your yacht has been cleared by Quarantine officers;
- ensure that any bonded animal is kept securely on board at all times;
- dispose of all garbage properly;
- do not trade foodstuffs with other overseas yachts or fishing boats;
- keep your yacht free of insects such as mosquitoes and midges; and
- report to Coastwatch vessels of overseas origin which you notice moored in unusual and remote locations.

Visitors are welcome – pests are not

Australia welcomes all visitors to the unspoilt wilderness areas of the Northern Territory. To ensure that these scenic areas remain open to visitors please make yourself aware of the risks and consequences of introducing pests and diseases.

If you are a tour operator, AQIS has many leaflets available to ensure your clients are aware of quarantine restrictions and pest and disease threats. Quarantine officers are also available to discuss quarantine restrictions either with individuals or at gatherings of tour operators.

Do not take or encourage others to take animal or plant material ashore from visiting vessels.

Before visiting remote areas enquire if quarantine restrictions apply and if they do, draw them to the attention of other travellers. If you are familiar with an area and notice unusual animal behaviour or signs of plant pests or diseases please report it to a Quarantine officer.

Keep a Top Watch

Whether you live in the Northern Territory or are just visiting you can help keep it pest and disease free. Contact the NAQS Quarantine office in Darwin or visit the AQIS homepage at www.aqis.gov.au.

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