

# INDUSTRY BRIEF

## Emergency Animal Disease (EAD) Preparedness

Friday 8 July, 2022

### Key points

Foot and Mouth Disease (FMD) and Lumpy Skin Disease (LSD) have both been detected in Indonesia, with FMD now being confirmed on the tourist island of Bali in July 2022, elevating the risk that FMD could reach Australia.

It is the Australian Government's responsibility for protecting Australia from these diseases, and the industry is doing everything we can to support their work. The Australian government has announced a range of new measures for travellers from Bali into Australia. These include biosecurity detector dogs at airports, additional signage and information about FMD for travellers and staff, as well as biosecurity officers present on all flights from Indonesia to Australia.

FMD is a highly contagious animal disease that affects cattle, sheep, goats and pigs. The disease can be spread by close contact between animals or the importation of infected products or contaminated clothing and footwear. In May 2022, an outbreak of FMD was first reported in cattle in Indonesia. Prior to the disease being detected in Bali, it was estimated that the probability of an outbreak of FMD in Australia in the next five years had increased to 11.6% as of June 2022 (up from 9% in March 2021). Now, following the outbreak in Bali, the probability of FMD entering Australia has presumably increased further.

LSD is a viral disease of cattle and water buffalo that causes relatively low mortality; however, the disease can result in animal welfare issues and significant production losses. The disease is spread primarily by biting insects such as certain species of flies, mosquitoes and possibly ticks. In March 2022, an outbreak of LSD was first reported in cattle in Indonesia. It is estimated that the probability of an outbreak of LSD in Australia in the next five years has increased to 28% as of April 2022 (up from 8% in March 2021).

An incursion of either LSD or FMD could have severe consequences for Australia's dairy industry, with significant impacts to the entire supply chain and international trade. Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) modelling projects a widespread FMD outbreak in Australia would have an estimated direct economic impact of around \$80 billion. The dairy industry has been extensively involved in the development of preparedness and response plans for each of these diseases.

### Foot and Mouth Disease (FMD)

Foot-and-mouth disease (FMD) is a highly contagious virus disease of animals. It is one of the most serious livestock diseases. It affects cloven-hoofed animals (those with divided hoofs), including cattle, buffalo, camels, sheep, goats, deer and pigs. It is found in many parts of the world, and has been reported in countries in Africa, the Middle East, Asia and South America.

While it can cause serious production losses the most significant impact of the disease occurs because of its effect on trade in livestock and livestock products. Countries without the disease, which include many of Australia's major trading partners do not import from, or severely restrict imports from FMD-infected countries.

FMD can spread through close contact between animals and be carried on animal products or short distances by the wind. Virus is excreted in breath, saliva, mucus, milk and faeces. Animals can become infected through inhalation, ingestion, and direct contact. The disease spreads most commonly through the movement of infected animals.

In May 2022, an outbreak of the virus was detected in cattle in Indonesia. Until this year, Indonesia had been free of FMD since 1986. The Department has offered significant assistance to combat and contain the outbreak in Indonesia.

To manage the risk in Australia, both government and industry have engaged in significant prevention, planning and preparedness activities. Australia maintains a strong biosecurity program at the border to manage FMD risks. Government and industry also undertake extensive planning and preparedness activities to ensure that should an incursion occur, the disease can be contained and controlled as quickly as possible.

Past preparations also include establishment of a National FMD Vaccine Bank in the UK in 2004 to ensure Australia has access to vaccines, should they ever be required to respond to an outbreak.

There have been a number of outbreaks in FMD-free countries that have had large socio-economic impacts. The 2001 outbreak in the United Kingdom caused losses of more than 8 billion pounds (approximately \$AUD 19 billion). Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) modelling projects a widespread FMD outbreak in Australia would have an estimated direct economic impact of around \$80 billion.

More information is available here, including comprehensive Q&As: <https://www.awe.gov.au/biosecurity-trade/pests-diseases-weeds/animal/fmd>

## Lumpy Skin Disease (LSD)

LSD is a virus which causes serious animal health impacts, including skin lesions, fever, abortion, milk production drops and death. LSD originates out of Africa and has spread through the Middle East and Southern Europe over the last decade, and through Russia, China, and Southeast Asia over the last five years. In March 2022, LSD was found in the Riau province in Northern Sumatra, Indonesia and shortly thereafter, Singapore.

The virus is mostly spread 'mechanically' by insect vectors, therefore the risk of the virus entering Australia via ship or plane is low. Instead, the risk of incursion is primarily thought to be from insects being blown from Indonesia into Northern Australia on monsoon winds.

In 2021, before the virus was found in Indonesia, the risk of LSD was thought to be 8% in the following five years. The risk of insects carrying the disease blowing across to Northern Australia on monsoon winds is now estimated to have increased from 8% to 28%.

The transmission through milk is unlikely, however this has never been tested (no published work). LSD is not zoonotic; therefore the milk is safe to drink.

Vaccines have been used to control the disease in other regions with mixed success. The most efficacious vaccines for LSD are live attenuated, meaning they contain a small amount of the live but weakened virus. Three challenges with the existing LSD vaccines are:

- The small risk that live attenuated vaccines are sometimes able to revert to virulence within the animal, thus causing clinical disease
- The limited manufacturing capacity of existing producers of the vaccine
- Vaccinated animals are unable to be differentiated from infected animals

There are currently no LSD vaccines registered for use in Australia. The only successful eradications of LSD have been achieved through the use of vaccines. One example is Croatia, which was declared 'free with vaccination' in 2019.

The Commonwealth Government has been supporting Indonesia's response to the LSD outbreak through the purchasing of vaccines and provision of expertise to the Indonesian government. Australia's Chief Veterinary Officer Dr. Mark Schipp has travelled to Indonesia to provide additional support.

More information on LSD is available here, including comprehensive Q&As: <https://www.awe.gov.au/biosecurity-trade/pests-diseases-weeds/animal/lumpy-skin-disease>.

## Response Information

Australia has arrangements in place to manage animal disease outbreaks and the dairy industry has been working with government and industry for years to ensure these arrangements are up to date and fit-for-purpose for the Australian dairy industry.

### Response plans & manuals

Australian Veterinary Emergency Plan (AUSVETPLAN) sets out, in a series of manuals and documents, the nationally agreed response to an emergency animal disease. Developed, updated and managed by Animal Health Australia (AHA), AUSVETPLAN acts as the central reference document in an event such as an FMD or LSD incursion.

AUSVETPLAN manuals are specific to emergency animal diseases (e.g. FMD manual, Lumpy Skin Disease manual), operations (e.g. decontamination manual, disposal manual) or enterprises (e.g. Pork processing manual, Meat processing manual) to provide guidance to decision makers in the event of a disease incursion in developing the operational plan.

The [AUSVETPLAN Foot and Mouth Disease](#) response strategy describes the nationally agreed approach to control and eradicate FMD if it occurs in Australia. The [AUSVETPLAN Lumpy Skin Disease](#) response strategy describes the nationally agreed approach to control and eradicate LSD if it occurs in Australia.

The **Dairy Enterprise Manual** has been under development for over a decade. This manual describes all relevant aspects of dairy enterprises and, like other enterprise manuals, has been written to cater for a reader who has minimal knowledge of the dairy sector. It is designed to assist decision makers involved in a response.

Dairy Australia has led a two-year process to ensure the current Dairy Enterprise Manual is updated, fit for purpose for the Australian dairy industry and can adequately explain the diversity of dairy enterprises in Australia and allow day-to-day operations that are unique to dairy to be tailored for wherever possible. The Dairy Enterprise Manual is now going through final approvals process.

### Cost-sharing arrangements

The [Emergency Animal Disease Response Agreement](#) (EADRA) is an agreement between all state and territory governments, the Australian government and livestock industry bodies which enables a quick and effective response to an EAD incident, while minimising uncertainty over management and funding arrangements.

FMD is categorised as a Category 2 disease, meaning the cost of the response would be shared 80:20 between Government and affected industries. LSD is categorised as a Category 3 disease, meaning the cost of the response would be shared 50:50 between affected industries and Government. The affected industry contribution would be paid back via a levy after a response, and cannot be activated until after an EAD incursion event and subsequent response is activated.

AHA has just recently published 'A quick guide to compensation and valuation in an EAD response', available here: <https://animalhealthaustralia.com.au/eadra/a-quick-guide-to-compensation-and-valuation-in-an-ead-response/>.

## What is the dairy industry doing to prepare?

### Issues Management Framework – LSD/FMD Response Team

The dairy industry has activated the Issues Management Framework in response to the increased risk of an EAD incursion, calling together an LSD/FMD Response Team in March 2022. The LSD/FMD Response Team acts as a central point for coordinating the response for the dairy industry, bringing together Australian Dairy Farmers (ADF), Australian Dairy Products Federation (ADPF) and subject matter experts from within Dairy Australia and across industry.

## **Cross-Industry Taskforce on LSD & FMD**

A National Cross-Industry Taskforce on LSD & FMD is being coordinated by the Red Meat Advisory Council (RMAC) on behalf of all affected industries. The Cross-Industry Taskforce is undertaking a whole-of-industry high-level and overarching coordination and collaboration role, ensure collaboration and coordination between industry and be a single point of contact for the government.

The Cross-Industry Taskforce has created four sub-working groups.

- i. Overseas in-country support
- ii. Trade and protocols
- iii. LSD diagnostics capability & vaccine development
- iv. Domestic containment strategy

The Cross-Industry Taskforce has also created a Communications Working Group. Dairy has representation on each sub-working group, along with the Communications Working Group. Significant work has been undertaken in each of these working groups, including Dairy Australia and Meat and Livestock Australia (MLA) undertaking a trade impact analysis to help inform the Government's market priorities.

## **Dairy industry policy changes**

In April 2022, ADF, along with other cattle industry representative organisations, changed their policy to support the importation of LSD live virus material into Australia to develop the diagnostic capacity and for the development of improved vaccines.

## **LSD virus deactivation in milk research**

Dairy Australia has identified a gap in research regarding the deactivation of the LSD virus through processing of dairy products. Dairy Australia has met with CSIRO/Australian Centre for Disease Preparedness (ACDP) and the Department regarding proposed research into virus deactivation in milk via pasteurisation which can be completed at ACDP following the importation of the live LSD virus.

Australia currently bans the importation of dairy products from LSD affected countries (including pasteurised dairy) which may have implications for Australian dairy market access objectives in the event that Australia has an LSD incursion.

## **EAD training - awareness and preparedness in the dairy industry**

The dairy industry undertakes annual training for industry leaders on emergency animal disease preparedness. Industry representatives play a critical role during an emergency animal disease (EAD) response by providing industry perspective, essential advice and guidance on response matters. The Dairy LSD/FMD Response Team has prioritised this training process to build capacity within industry leadership regarding the EAD preparedness systems already in place, and how the industry will respond during an outbreak.

Animal Health Australia (AHA) provides education and training that builds the biosecurity response capability of members, which assists them to meet their responsibilities under the EADRA. The AHA training options are outlined below.

### EAD Foundation course

The purpose of this course is to inform learners about how EAD responses are managed in Australia, and to give a foundation for further training in EAD response functions. This course is **free and available online for anyone to complete**. It takes approximately two hours to complete. More information is available here: <https://animalhealthaustralia.com.au/online-training-courses/>.

### FMD Awareness course

Developed by the Queensland Department of Agriculture and Fisheries, this course will provide an overview of the risks that FMD pose to Australia's communities and livestock industries, and what can be done to help prevent FMD reaching and infecting susceptible livestock. This course is **free and available online for anyone to complete**. It takes approximately two hours to complete. More information is available here: <https://animalhealthaustralia.com.au/online-training-courses/>.

### Liaison-Livestock Industry training (LLI)

As an industry signatory to the EADRA, the dairy industry has an obligation to have personnel that are appropriately trained to represent and act on behalf of the industry as LLI personnel. LLI training should be refreshed at least every five years.

LLI training is targeted at industry personnel who have been nominated by their peak industry body and are likely to represent their industry under the LLI function during the event of an EAD incident. These individuals may or may not be an existing staff member of the peak industry body; regardless, the LLI function is responsible for reporting to and communicating with their peak industry body, and liaising with the Incident Management/Coordination Team in the control centres.

By participating in the workshop, individuals will gain an understanding of and/or become familiar with the following:

- How EAD responses are conducted in Australia, including response structure, activities and routines of a control centre and response arrangements.
- Roles, responsibilities and attributes of LLI personnel.
- What they could expect as LLI personnel including appointment, deployment, and control centre induction.
- Which functions in the control centre are the most relevant to the Liaison function.
- How communication and decision-making processes operate during an EAD response.
- The difference between the LLI and Specialist Advice role.

More information on the LLI training is available here: <https://animalhealthaustralia.com.au/liaison-livestock-industry-role/>.

### Consultative Committee on Emergency Animal Diseases training (CCEAD)

CCEAD training is targeted at nominated veterinary and technical experts from industry and government who would advise their NMG representative about disease control in an EAD response. CCEAD training should be refreshed at least every five years. Having completed the training, participants should:

- be prepared to participate as (or advise and support) a member of the CCEAD.
- be familiar with the various phases of an EAD response in accordance with the EADRA.
- understand their respective roles and responsibilities as signatories to the EADRA.

More information on the CEAD training is available here: <https://animalhealthaustralia.com.au/national-management-group-and-consultative-committee-on-emergency-animal-diseases-training/>.

### National Management Group training (NMG)

NMG training is targeted at high-level industry and government members who have the authority to make financial commitments to a cost-shared EAD response. For the Australian dairy industry, this includes the ADF President and CEOs of ADF and ADPF. More information on the NMG training is available here: <https://animalhealthaustralia.com.au/national-management-group-and-consultative-committee-on-emergency-animal-diseases-training/>.

### **Communications and extension**

Dairy Australia has begun developing farmer-facing communications and extension programs to help improve awareness, surveillance and aim to reduce barriers to reporting suspected disease, particularly in our higher risk regions (northern QLD, followed by southern QLD and WA).

ADF and Dairy Australia are looking to work with AHA to coordinate collaborative communications across all cattle industries.

Dairy Australia is also working with ADPF to develop a workshop for processors to provide an overview of the likely impact and requirements of an incursion on dairy processors and discuss business implications and contingency planning.

## Be prepared

### Be aware of the signs of FMD and LSD

Signs of FMD in cattle include:

- Blisters in and around the mouth, nose, teats and feet
- Drooling
- Lameness
- Sudden drop in appetite and/or milk yield

More information on FMD: <https://animalhealthaustralia.com.au/foot-and-mouth-disease/>

Signs of LSD in cattle include:

- Discharge from the eyes and nose – usually observed first
- Decreased milk yield in lactating cattle
- High fever that may exceed 41°C
- Appearance of firm skin nodules (lumps) of 2 to 5 cm in diameter, particularly on the head, neck, limbs, udder, genitalia and perineum within 48 hours of onset of fever

More information on LSD: <https://animalhealthaustralia.com.au/lumpy-skin-disease/>

### Ensure your farm biosecurity is up-to date and adhere to traceability obligations

People, vehicles and equipment pose a high biosecurity risk on-farm. Keeping track of visitors, quarantining new stock, and ensuring gear used on multiple farms (e.g. disbudding irons) is cleaned before use is a good starting place in preventing any disease spread. The best defence against pests and diseases is to implement good biosecurity practices and to prepare an on-farm biosecurity plan.

A simple, high-level biosecurity plan is available here: <https://www.farmbiosecurity.com.au/toolkit/planner/>

A more detailed, dairy-specific biosecurity plan is available here: <https://www.dairyaustralia.com.au/biosecurity>

Ask your vet for additional or more specific support. It is also crucial dairy farmers adhere to traceability obligations, including ensuring all documentation is correctly completed. More information on meting livestock transaction and movements is available here: [Livestock Movements | Integrity Systems](#).

### Biosecurity gate signs

If it can move, it can carry diseases, pests and weeds. For this reason, people, vehicles and equipment pose a high biosecurity risk and should be managed accordingly. Signs can be used to indicate to visitors the importance of following biosecurity procedures on your property and remember to include contact details in the space provided.

You can purchase biosecurity signs from AHA here: <https://animalhealthaustralia.com.au/shop/>.

### Upskill and complete EAD training courses

Complete some of the free, online courses offered through AHA, including the EAD Foundations and FMD Awareness courses. More information is available here: <https://animalhealthaustralia.com.au/online-training-courses/>.

### How to prevent bringing Foot-and-Mouth Disease on farm

Australians traveling to Indonesia or Malaysia for work or holiday could potentially bring FMD to Australia by accident unless they take appropriate precautions. With Bali being a popular travel destination for Australian tourists, the risk of FMD reaching our shores is currently heightened. Dairy Australia has published preventative guidance, available here: [How to prevent bringing Foot-and-Mouth Disease on farm | Dairy Australia](#)

### **AHA Animal Disease Alerts newsletter**

Given the heightened threats of emergency animal diseases at our borders, particularly foot-and-mouth disease and lumpy skin disease, AHA will soon be releasing a new animal disease alert newsletter. Anyone interested can subscribe here: [Subscribe to our animal disease alerts - Animal Health Australia](#).

### **Australian Biosecurity Webinar Series**

The Government has a Biosecurity Webinar Series and you can hear from government and industry experts on FMD (episode 7) and LSD (episode 9): <https://www.agriculture.gov.au/biosecurity-trade/policy/australia/public-awareness/webinar-series>.

## **A quick response gives the best chance of eradication. Report any unusual signs in your cows to the Emergency Animal Disease Hotline - 1800 675 888**

### **Key messages**

#### **General**

- Industry is urged to be alert but not alarmed by the recent outbreaks of LSD and FMD in Indonesia.
- Australia is currently free from both diseases and our priority is to keep it that way. At the same time, while we are confident in Australia's strong biosecurity measures, we are not taking anything for granted.
- Significant preparations are already in place or underway from the national level all the way down to individual farm level to support our response and recovery, should these diseases arrive.
- Importantly, there are no safety implications for the human food chain from an outbreak of LSD or FMD. Australian meat processing standards also ensure no animals with signs of disease enter the food chain. Australian food standards also ensure milk for human consumption is only sourced from animals with no signs of disease.

#### **Potential impact**

- LSD is a disease of cattle and water buffalo while FMD affects all cloven-hoofed animals including cattle, sheep, goats and pigs.
- An LSD or FMD outbreak in Australia would be devastating to our livestock and associated industries through international trade losses, market disruptions, animal health impacts and production losses. The trade implications are difficult to predict with certainty as such issues are highly situational and will vary across markets.

#### **Industry response**

- There are many activities taking place across industry and government to combat the potential arrival of LSD and FMD in Australia.
- A joint industry taskforce has been established to ensure coordination and collaboration across all affected industry sectors, comprised of the Red Meat Advisory Council, National Farmers' Federation, Australian Dairy Farmers' and their respective industry service providers.
- Four skills-based committees have been set up by the taskforce covering overseas in-country support; trade and protocols; diagnostic capability and vaccine development; and domestic containment strategies.
- The taskforce has developed a comprehensive workplan addressing the key elements of planning, response and recovery.

### Government response

- LSD is a disease of cattle and water buffalo while FMD affects all cloven-hoofed animals including cattle, sheep, goats and pigs.
- An LSD or FMD outbreak in Australia would be devastating to our livestock and associated industries through international trade losses, market disruptions, animal health impacts and production losses.
- The trade implications are difficult to predict with certainty as such issues are highly situational and will vary across markets.

### On-farm response

- Good biosecurity practices and early detection are essential to reduce the potential impact of these diseases.
- Farmers and producers are urged to exercise vigilance on-farm by:
  - Making sure you are aware of the signs of LSD and FMD
  - If you suspect LSD or FMD in your livestock, immediately calling the Emergency Animal Disease Watch Hotline on 1800 675 888
  - Adhering to all traceability obligations, including ensuring all documentation is correctly completed
  - Reviewing your on-farm biosecurity plan

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