



# Waste management guide for Australian egg farms

Waste management is critical in limiting infection and spread of disease. **This guide is designed to help Australian egg farmers plan for a waste disposal situation.** This could be a routine activity, such as the management of faeces from the shed after de-population or an unexpected activity such as the management of carcasses after a disease outbreak.

Deciding how to manage waste can be done in three steps.



## Step 1 Defining the situation

For each waste disposal situation, the following information needs to be established, use **Table 1** to help you define your situation:

- The volume of waste.
- The type of waste – refer to **Table 1**.
- Whether there is the capacity to manage the volume of waste on-property.
- Whether there is a known infectious pathogen present on the property, and whether that agent is notifiable.
- Legal requirements to minimise biosecurity risks
- Risks to environment and people.



**Table 1. Types of waste on a poultry farm**

Waste type	Definition
Cardboard	Material made of cardboard or paper, including egg fillers and packaging.
Chemicals and medications	Disinfectants and hazardous chemicals, including chemical packaging and medications such as vaccines.
Dead birds	Birds that have died from disease or other causes, including culling.
Disposable clothing, footwear	Material that may be single-use or single-premises use.
Dust	Particulate matter captured in filters or on equipment, may include bird materials e.g. feathers, dander.
Feed	Materials stored and provided to the birds as feed, including in the silo and within the shed.
Litter	Material used for bedding, which could be used or unused.
Manure	Raw faecal-based solid waste from the birds.
Metals	Metal components or old equipment and machinery that may not be able to be adequately cleaned and sanitised.
Other organic material	Material that is organic, such as grass/tree clippings, soil, compost and wooden pallets.
Plastics	Material made of plastic, including egg fillers and packaging and plastic pallets.
Poultry products	Materials produced by the birds that is to be discarded e.g. broken or unusable eggs, including table and hatching eggs.
Water	Water provided to the birds for drinking and ventilation, prior to or after cleaning, including external and header tanks

## Step 2 Determining waste disposal options

Waste can be disposed of on or off-farm in a range of ways. This step will help you understand whether on or off-farm disposal will be appropriate in your situation, **based on the risk associated with the waste.**

### Is on-farm disposal an option?

Whether waste can be disposed of on-farm will depend on:

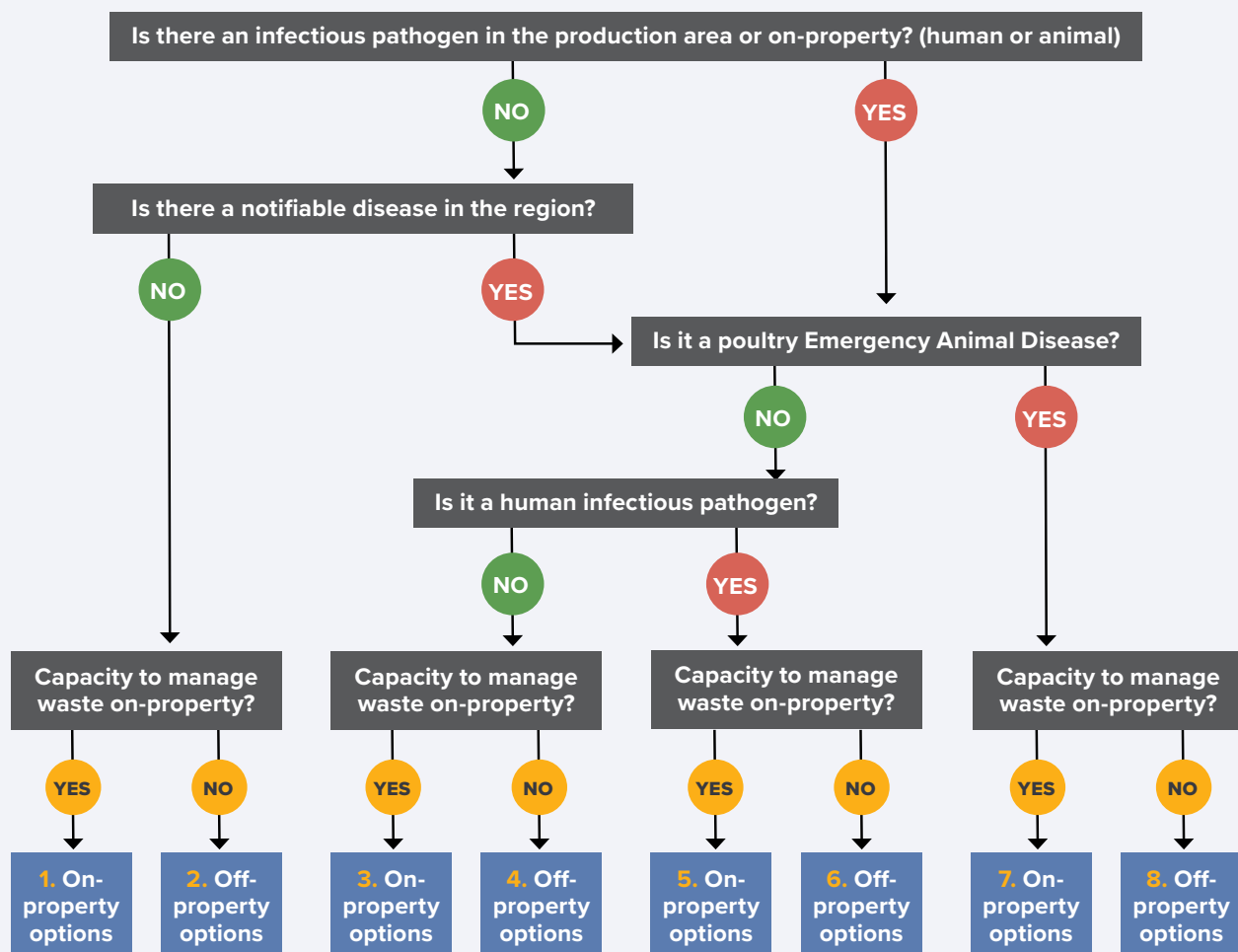
1. The capacity of the farm to manage the waste (i.e. if the proper equipment and/or ample space available) and,
2. The risk status of the waste.

It is important to know the risk status of the waste.

Dead birds or waste that has been in contact with live birds has a higher risk status as it could be contaminated with any disease pathogens present in the flock. Any pathogens present could be transmitted to other flocks/ farms and vice versa. When considering waste disposal options keep in mind that waste must not contaminate land, ground and surface water or cause odour. Poorly managed waste can also attract vermin.

Use **Figure 1** and **Options 1 to 8** to decide if **on-farm** or **off-farm disposal** options are available in this situation.

Figure 1.



**Option 1. On-property disposal options for situations when there are no infectious pathogens on property or in the region**

Waste	Landfill / burial	Composting	Digestion	Burning / incineration
Cardboard	✓			✓
Chemicals and medications	✓			
Dead birds	✓	✓	✓	✓
Disposable clothing, footwear	✓			✓
Dust	✓	✓	✓	
Feed	✓	✓	✓	✓
Litter	✓	✓	✓	✓
Manure	✓	✓	✓	✓
Organic material	✓	✓	✓	✓
Plastics	✓			✓
Poultry products	✓	✓		
Water	✓		✓	

**Option 2. Off-property disposal options for situations when there are no infectious pathogens on property or in the region**

Waste	Landfill / burial	Processing	Rendering	Composting	Digestion	Burning / incineration
Cardboard	✓					✓
Chemicals and medications	✓					
Dead birds	✓		✓	✓	✓	
Disposable clothing, footwear	✓					✓
Dust	✓			✓	✓	
Feed	✓			✓	✓	✓
Litter	✓			✓	✓	✓
Manure	✓			✓		✓
Organic material	✓			✓	✓	✓
Plastics	✓					✓
Poultry products	✓	✓		✓		
Water	✓				✓	

**Option 3. On-property disposal options for situations where there is an animal disease on-property but it is not an EAD**

Waste	Landfill / burial	Composting	Digestion	Burning / incineration
Cardboard	✓			✓
Chemicals and medications	✓			
Dead birds	✓	✓	✓	✓
Disposable clothing, footwear	✓			✓
Dust	✓	✓	✓	
Feed	✓	✓	✓	✓
Litter	✓	✓	✓	✓
Manure	✓	✓	✓	✓
Organic material	✓	✓	✓	✓
Plastics	✓			✓
Poultry products	✓	✓		
Water	✓		✓	

**Continued →**

**Options 4 & 8. Off-property disposal options for situations where there is either an EAD or a non EAD infectious pathogen on-property**

Waste	Landfill / burial	Processing	Rendering	Composting	Digestion	Burning / incineration
Cardboard	✓					✓
Chemicals and medications	✓					
Dead birds	✓		✓	✓	✓	✓
Disposable clothing, footwear	✓					✓
Dust	✓			✓	✓	
Feed	✓			✓	✓	✓
Litter	✓			✓	✓	✓
Manure	✓			✓		✓
Organic material	✓			✓	✓	✓
Plastics	✓					✓
Poultry products	✓	✓		✓		
Water	✓				✓	

**Options 5 & 7. On-property disposal options for situations where there is an EAD or human infectious disease on property**

Waste	Landfill / burial	Composting	Digestion	Burning / incineration
Cardboard	✓			✓
Chemicals and medications	✓			
Dead birds	✓	✓	✓	✓
Disposable clothing, footwear	✓			✓
Dust	✓	✓	✓	
Feed	✓	✓	✓	✓
Litter	✓	✓	✓	✓
Manure	✓	✓	✓	✓
Organic material	✓	✓	✓	✓
Plastics	✓			✓
Poultry products	✓	✓		
Water	✓		✓	

**Option 6. Off-property disposal options for where there is a human infectious disease on-property**

Waste	Landfill / burial	Processing	Rendering	Composting	Digestion	Burning / incineration
Cardboard	✓					✓
Chemicals and medications	✓					
Dead birds	✓		✓	✓	✓	✓
Disposable clothing, footwear	✓					✓
Dust	✓			✓	✓	
Feed	✓			✓	✓	✓
Litter	✓			✓	✓	✓
Manure	✓			✓		✓
Organic material	✓			✓	✓	✓
Plastics	✓					
Poultry products	✓	✓		✓		✓
Water	✓				✓	

## Step 3 Devising a disposal plan

In this final step you will decide which of the disposal options available to you will be the best fit for the situation.

The selected disposal method should be practical, cost effective and minimise risk.

Once you have decided whether the waste will be disposed of on or off-property and how, its important to identify the risks to the disposal

location and surrounds. 'Risk' is made up of two components: type and severity.

To help you in identifying the risks, the risk types are listed below. Its recommended you work through how the waste disposal could impact the following and whether that impact will be low, medium or high (severity).

- biosecurity (e.g. potential to spread
- disease-causing organism)
- surrounding environment
- occupational health and safety
- society
- resource and equipment availability

**For example:** disposing of a silo of feed on farm by burial has a low risk of spreading a disease-causing organism.

After identifying the risks you can plan to carry out the disposal so that risks are minimised.

**For example:** to ensure that the biosecurity risk of the burial of feed on-farm is minimised, feed will be buried at a depth and location unlikely to be dug up by pets and wildlife.

The following listed methods are available for disposal of egg farm waste.

### Viable disposal options for Australian egg farms

#### Landfill/burial

Burying waste material, either on-site or off-site and includes dumping and disposal via required avenues for chemical and medical wastes.

For more information on burial, incineration and composting, particularly for carcasses and manure see the AUSVETPLAN Operational Manual for Disposal: [www.bit.ly/3h5zwcD](http://www.bit.ly/3h5zwcD)



#### Composting

Decaying organic waste through a process that involves the generation of heat by microbes.

May involve the material be managed in situ. For more information on composting and what would be required on-farm see [www.bit.ly/2PWIk8L](http://www.bit.ly/2PWIk8L)



#### Processing

Refers to commercial processing, including pasteurisation, of egg pulp and in-plant processing of birds.

#### Rendering

Using high temperatures to convert waste from animal production into fat and protein meal product. Check regulated waste requirements in your state. Rendering is an option for dead bird and spent hen disposal if a rendering plant is located nearby.

#### Anaerobic digestion

Decaying organic waste using bacteria in the absence of oxygen.

#### Incineration/burning

The combustion of waste using controlled conditions at high temperature.