Backyard Biosecurity

It's up to all of us

AGRICULTURE VICTORIA

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Contents

Welcome

Maybe you are new to running a property, or maybe you've had a small property or some livestock for years – this booklet will run you through the crucial things to know and do to keep your property safe and minimise the risk of pests and diseases.

It covers the biosecurity fundamentals of managing a small-scale landholding.

24/7

Emergency Animal Disease Hotline (available 24/7)

1800 675 888

Report any unusual signs or suspected cases of emergency animal disease immediately.

Protect your patch

Protecting Australia's livestock industries

All livestock owners also have a duty to help protect Australia's valuable livestock industries from exotic animal diseases, that is, diseases that we do not have in this country. More than 70 percent of Australia's livestock products such as meat and wool are exported overseas. Those overseas markets are vital for the social and economic well-being of our livestock industries.

Australia is extremely fortunate to be free from many exotic animal diseases such as foot-and-mouth disease, lumpy skin disease and mad cow disease, which are found elsewhere in the world. An outbreak of foot-and-mouth disease would result not only in potentially serious impacts to the health and welfare of many livestock, but also the immediate closure of most export markets which would have a devastating impact on our farmers and rural communities. We encourage you to learn about the symptoms of these important diseases know what to do if you have any concerns about your livestock

Biosecurity – it's up to all of us

Biosecurity is everyone's responsibility. All landholders, regardless of farm type or size have an important role to play in protecting their properties, animals, and our state and country from biosecurity threats.

Good biosecurity practice involves a series of measures to protect against the entry and spread of pests and diseases. Biosecurity is relevant across all sectors, from Australian ports and borders, to farm paddocks and boundary fences.

Anytime you see something you are unsure of when it comes to your livestock health, contact your local vet, your local Agriculture Victoria office or telephone Agriculture Victoria on 136 186. If you suspect a case of an emergency animal disease, report this immediately to the Emergency Animal Disease Hotline on **1800 675 888**. More information about emergency animal diseases can be found on the Agriculture Victoria biosecurity website.

Good biosecurity starts on your farm. Watch this video to find out what you should do to practice good biosecurity.

Take these steps on-farm for high standard biosecurity

Manage vehicles and visitors onto your property

- ○ Place biosecurity signage at all vehicle and pedestrian access points to clearly outline visitor obligations. This may include prompting sign-in processes, or restricting access to certain areas of your property.
- ○ Have facilities and equipment in place for washing and disinfecting shoes and clothing and any other equipment and vehicles that enter your property.
- ○ Limit access of visitors or contractors to your livestock or livestock holding areas and ensure everyone arrives with clean footwear and clothing.
- ○ Document all vehicle and people movements onto your property, such as fodder deliveries, milk pick-ups and agricultural contractors.
- ○ Do not allow visitors onto your farm if they have been in a foot-and-mouth disease infected country in the past seven days.

Come Clean – Go Clean is a simple and effective strategy to minimise the spread of animal diseases. Watch this video to find out more.

Managing livestock on your property

- ○ If you are working on a property and are in contact with sick animals, wash your hands, change your clothing, and wash footwear and any equipment after contact, to avoid infecting other healthy animals.
- ○ If you are working on a property and are in contact with sick animals, wash your hands, change your clothing, and wash footwear and any equipment after contact, to avoid spreading disease to other healthy animals. Some diseases of livestock are zoonotic, they can be transmitted from animals to humans. Zoonotic diseases include Anthrax, Rabies, Hendra Virus, Q-Fever and Scabby Mouth
- ○ All animals introduced to your property, whether purchased or on agistment, should arrive with relevant movement documentation such as a National Vendor Declaration.
- ○ When new livestock arrive on your property, isolate them and monitor closely for any signs of sickness for up to two weeks (minimum seven days) before joining with your existing flock or herd. Always monitor the health of your herd or flock on a regular basis.
- ○ Do not feed or supply pigs with meat, meat products, imported dairy or any food that has been served on the same plate or has come into contact with meat. This is prohibited pig feed.
- ○ You must not feed any Restricted Animal Material (RAM) to your ruminants. Ruminants are animals that chew the cud, such as cattle, sheep, goats, deer, buffalos, camels, camelids and other cloven–hoofed species.

How can you manage the introduction of new livestock to protect the rest of your stock? Watch this video to find out more.

Farm biosecurity planning

Remember to review and update your farm biosecurity plan.

A farm biosecurity plan is an essential tool for farmers to prevent, eliminate, and minimise biosecurity risks on-farm.

A farm biosecurity plan is a practical way of showing how you are preventing the introduction of pests, disease, weeds and contaminants to your property, spreading around your property, or spreading from your property.

A farm biosecurity plan should:

- Define your responsibilities;
- Outline the disease protocols used on your property;
- Ensure property information and biosecurity measures are quickly accessible; and
- Enable you to easily communicate your biosecurity procedures to others.

There are no right or wrong answers when developing a farm biosecurity plan – the only bad biosecurity plan is the one you don't have.

Information on how to develop a farm biosecurity plan can be found on the Agriculture Victoria website. Workshops and webinars on developing a farm biosecurity plan are also currently being delivered. Visit agriculture.vic.gov.au/events for details.

What farm biosecurity plan template should I use?

A farm biosecurity plan is an important risk management tool. The right plan for you depends on the type and risk profile of your farm business and your particular needs. A number of templates are available, with some examples outlined below.

Animal Health Australia on-farm biosecurity

The Animal Health Australia (AHA) Better On-farm Biosecurity web page includes a video that demonstrates how to complete a farm biosecurity plan and has a downloadable on-farm biosecurity plan template. You can also access an action planner and other biosecurity essentials.

Beef cattle, sheep and goats

Integrity Systems provides a range of tools and assistance to support compliance with the Livestock Production Assurance (LPA) program.

The Livestock Production Assurance (LPA) program is the on-farm assurance program that underpins market access for Australian red meat.

Download the LPA On-Farm Biosecurity Management Plan template or if you have an LPA account you can also upload the information online.

Dairy: Farm Biosecurity Planning

The Dairy Australia emergency animal disease preparedness website has several downloadable resources including a farm biosecurity plan template.

Pigs: Biosecurity plan and resources

On Australian Pork biosecurity plan and resources website, you will find tools to help develop biosecurity plans and support implementation of simple, everyday biosecurity practices to protect your herd health.

Resources are available for all levels of pig keeping and production, whether you have one or two pet pigs, a hobby farm, keep pigs for your own consumption or are a small or large commercial operation.

Agriculture Victoria animal health and welfare staff are offering hands-on help to pig owners to develop an on-farm biosecurity plan from now until June 2024. Along with help developing a biosecurity plan, Agriculture Victoria staff will also undertake free worm testing for pig herds. The property visits and sampling are undertaken voluntarily.

To obtain help with developing a biosecurity plan and take part in the free testing contact pig.biosecurity@agriculture.vic.gov.au

Alpacas: Biosecurity planning and resources

Q Alpaca and Alpaca CheQA are quality assurance programs that can help you monitor and manage known diseases and help you reduce the risk of an emergency animal disease.

The AAA has a page about alpaca biosecurity and recommends the National Biosecurity Reference Manual: Grazing Livestock Production manual for alpaca owners. They also provide an alpaca industry biosecurity plan template.

Biosecurity Management Plan (Victoria)

New laws have been introduced in Victoria under the Livestock Management Act 2010 (LMA) and the Livestock Management Regulations 2021 enabling livestock producers to protect their property from unlawful trespassers.

To take advantage of these protections, producers must ensure necessary visitor consent procedures are in place, clearly display compliant biosecurity signage and include a farm map and specific information as part of their farm biosecurity plan.

More details about the requirements of this framework can be found online at: agriculture.vic.gov.au/bmp.

Templates:

- Biosecurity Management Plan (BMP) coversheet
- Biosecurity sign templates

Rules, regulations and permits for keeping livestock

Having livestock can bring much joy and satisfaction, but it also brings extra work and responsibilities.

You are responsible for making sure your animals have adequate food and water, are handled properly, protected from extreme weather conditions and their health is managed.

There are certain rules and responsibilities designed to protect you and your animals. Here are a few areas you need to be familiar with.

A **PIC** is like a driver's licence

NLIS Tags are like the number plates on your car

The **NVD** is the car registration papers

A **National Animal Health Declaration** is the mechanic's report

Permits to have pigs and poultry on your land

While owning land can give you great freedom, you should also be across the rules and regulations governing land management.

Land-use planning permits

All pig farms, and poultry farms with greater than 100 poultry (or 10 emus and/or ostriches) currently require a land-use planning permit in the following zones:

- Farming Zone
- Rural Activity Zone
- Green Wedge Zone
- Green Wedge A Zone
- Rural Conservation Zone
- Rural Living Zone.

The planning permit process is necessary because even small, free-range pig farms can have significant environmental and community amenity impacts if not sited and managed correctly.

For more information see:

- Planning permits for Victorian pig and poultry farms
- Planning and farm development

Apply for, update or amend a Property Identification Code (PIC) online

Victorian law requires people to have a Property Identification Codes (PIC) for the properties on which they intend to graze or keep:

- one or more cattle, sheep, goats, pigs, alpaca, llamas, deer, horses, and/or camels
- more than 50 poultry (domesticated fowl, chickens, ducks, geese, turkey, guinea fowl, pigeons, quail or pheasants) or 10 emus or 10 ostriches.

Register for a free Property Identification Code (PIC). Update your PIC if you make changes to livestock on your property, change your phone number or email address or sell your land or relocate.

Use National Livestock Identification System (NLIS) tags – cattle, sheep and goats

In Victoria, pigs must be identified before being moved off a property with either a tag or tattoo brand, depending on their body weight. This includes pigs that are given away or are kept as pets.

- Less than 25kg — must be tagged
- More than 25kg — must be tattooed.

For more information visit NLIS Pigs.

View the video on tagging and tattoo branding requirements for pigs.

Other livestock species

There are currently no NLIS tagging requirements for:

- alpaca
- llamas
- camels
- deer
- horses
- poultry (domesticated fowl, chickens, ducks, geese, turkey, guinea fowl, pigeons, quail or pheasants), or
- emus or ostriches.

Update the National Livestock Identification System (NLIS) database regularly

Cattle, sheep and goats

When cattle, sheep and goats are moved between properties with different PICs, the person receiving the livestock is required to register the movement on the NLIS database within 48hrs. Visit property to property movements of livestock for more information.

Pigs

PigPass is a national tracking system that provides information on the movements of pigs in Australia. It is free to register with PigPass. It is designed to link pigs to properties via:

- Property Identification Codes (PICs)
- Ear tags and tattoos
- Pig movement documentation (the PigPass NVD)

If a pig or pigs are moving to a property with a different PIC, their movement must be recorded. Whether you have one pet pig or hundreds – you must register with PigPass and record movements of pigs on the PigPass database.

The person receiving the pig/s must record the movement on the PigPass database within 48 hours of arrival at the new property.

This includes:

- pet pigs
- pigs being given away
- pigs traded through online selling platforms such as Gumtree and buy, swap, and sell platforms

Livestock legislation in Victoria

Anyone who owns, manages, or works with livestock must comply with certain laws, standards and Codes of Practice. Visit livestock legislation in Victoria for more information.

Movement Documentation

Cattle, sheep and goats

A movement document such as a Livestock Production Assurance National Vendor Declaration (LPA NVD) or a similar document must be completed by the owner or person responsible for the husbandry of the livestock when they move.

The document creates a record of the movement and provides the receiver with valuable food safety information (for example, chemical treatment and exposure history).

Livestock Production Assurance (LPA) is industry's on-farm quality assurance program. Producers must be LPA accredited to access sheep, goat and cattle LPA NVD forms.

People who choose to not to be part of the LPA program can complete a generic sheep, goat or cattle Consignment Declaration. Confirm with the person who will receive your cattle, sheep or goats before the consignment leaves your property that they are willing to accept a non-LPA Consignment Declaration.

Movement documents for purchased livestock must be kept for seven years for cattle, sheep and goats, to allow the tracking of animals if the need arises.

For more information see: Movement documentation.

PigPass movement documents are accessible after registration

How to do a farm map

What can you use to identify key biosecurity features on your property?

What is an essential part of your biosecurity plan and emergency preparedness?

A farm map, of course!

In this edition, we'll go through why they're important and some options to make your own.

Why do I need a farm map?

A picture tells 1000 words! Having a map is an easy way to convey important and specific information about your farm.

A farm map can also be used to share information to family, employees, visitors & contractors such as the location of paddocks, gates, dams, tanks, troughs and pipelines. This information can be critical during an emergency such as fire or flood.

A farm map is an essential aspect of your farm biosecurity plan and a requirement for your LPA property risk assessment and Biosecurity Management Plan.

Watch webinar recording

Agriculture Victoria's 'Biosecurity How-to webinar' series, has a recorded session on using the Google Maps tool. Click here to watch the recording (passcode: Biosecurity2022), which can be used to develop a farm map.

What features do I need on my farm map?

The number, type and extent of features that might be included in a map will depend entirely on the purpose of the map, your enterprise and the size and complexity of your farm. Many farm maps use an aerial photo as a background along with contours and natural features such as waterways.

Features you might add to your map include:

General features	Biosecurity features	
• Farm boundary • Paddocks • Fences • Gates • Laneways • Buildings • Soils • Shelterbelts • Tanks • Troughs • Pipelines • Dams	• Entry/exit points • Quarantine area • Stock containment areas • Double fenced areas • Public access areas • Stock yards • Feed storage areas • Parasite/pest sites • Machinery shed • Chemical storage shed	• Chemical/fuel/oil spillage area • Wash down area • Power poles • Animal treatment sites • Effluent disposal area • Stock disposal • Rubbish dumps • Dog kennels/chook yards

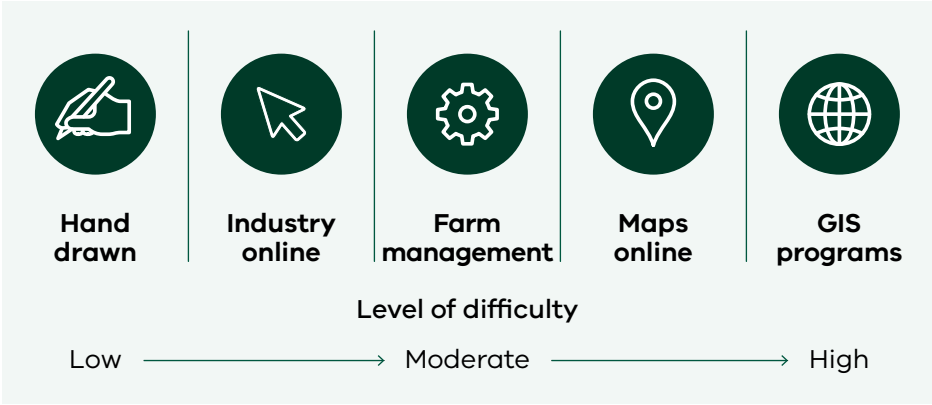
You may also use your map to plan future improvements such as laneways, land class fencing and revegetation areas. Adding a scale, legend and north sign can make your map easier to read.

If an emergency animal disease outbreak is declared, Agriculture Victoria is responsible for the destruction and disposal of animal carcasses as required, including those that can be buried on-farm. Stock disposal areas should be marked on your farm map, so you can help with timely decision making and support Victoria to be well prepared to respond quickly to any EAD outbreak if it occurs.

Agriculture Victoria and the Environment Protection Authority (EPA) have developed guidance for on-farm burial of carcasses in an emergency animal disease outbreak so you can make sure your biosecurity plan includes details about if, where and how carcasses can be buried on your property. If the property does not have an area that meets the criteria in this guidance, carcasses may need to be taken off-site, which would be managed by Agriculture Victoria. Other disposal methods may be considered where appropriate, such as composting, shallow-burial with carbon, incinerating in approved facilities and rendering, where the number of animals is low.

Where can I get started?

There are a range of ways you can use to develop a farm map. It is important to understand the limitations and how easy it is use the tools/programs available. Some programs are not ideal for biosecurity mapping due to limited mapping options.



Hand drawn

This can be the simplest option, if you are not comfortable with technology and don't have access or the time to learn how to use programs.

You can use a blank sheet of paper or print off a satellite or aerial photo image from the internet. Consider using clear transparent overlays to map different characteristic of the farm. Using markers on the overlays makes it easy to update. There is a blank template within the Biosecurity Management Plan that can be used to hand draw a map.

Alternatively, you can make a pretty neat map using features and symbols commonly found on most computers (e.g. Paint, Word, PowerPoint). Saving maps made in these programs makes it is easy to upgrade at a later date. Taking a good quality photo of your hand drawn map is also an easy way to share it with others.

Online map

Agriculture Victoria has an online tool called Navigating Farm Developments that can help farmers and farm advisors identify planning and other requirements related to farm development projects. It serves 8 agricultural sectors and describes the sector specific planning requirements for many different types of developments (beef, dairy, goats, grains, horticulture, pigs, poultry, and sheep).

It is not a standalone suitable tool for preparing a farm map, however it has a function that helps you to map where you might be able to bury carcasses on-farm in the event of an emergency animal disease outbreak. It includes the minimum burial criteria that need to be met (for example, distance to waterways) to protect the environment and public health, so you can plan and determine if and where you could bury livestock if required.

For extra help, an instructional e-guide is available.

Farm management programs

There is a wide range of farm diary/management programs on the market. These are normally used to maintain daily records such as stock movements, paddock details, chemical use and a range of other information. While they can be excellent for these purposes, they have varying mapping capability and costs.

Visit NSW Government's Farms of the Future website to access a resource of AgTech and on-farm connectivity solutions and search for 'mapping'.

Maps – Online

Google Maps or Google Earth Pro are two of the most commonly used online mapping programs. These are great for a one-off map (such as a biosecurity property risk map), are relatively easy to use and are free (with some copyright limitations). Their mapping and data storage capability is quite limited, and they can be difficult to print.

- Google Earth Pro
- Google maps

Setting up a Google account

- support.google.com/accounts/answer/27441?hl=en

Using Google My Maps

- www.google.com.au/maps/about/mymaps/
- sites.google.com/mrpiercey.com/resources/geo/my-maps

Geographic Information System (GIS) programs

These are highly versatile, high-end mapping and data storage which are commonly used by big companies and government agencies. They can be expensive, apart from QGIS which is a totally free product! However, it is mostly recommended for people who enjoy using computer and will use it on a regular basis.

Agriculture Victoria has developed a customised version of QGIS called 'QGIS My Farm Plan'. This product has a simplified user interface and some 200 custom layers suitable for farm mapping. At this stage the product is only available to landholders attending an Agriculture Victoria mapping workshop. For upcoming sessions visit Agriculture Victoria's events page.

- QGIS – A Free and Open-Source Geographic Information System
- ArcGIS/ArcMap – Esri builds the leading mapping and spatial analytics software designed to support the mission and business objectives of organizations around the globe, regardless of size.
- MapInfo – Precisely provides a complete, desktop mapping solution to manage, analyse and visualise data for mapping and map publishing.

Livestock Production Assurance (LPA) and farm mapping

If you are a red meat producer accredited with the LPA program, a key requirement is having a property risk assessment which involves mapping the property for potential risk sites and recording management of such sites. This is to ensure a livestock producer is doing all they can to prevent unacceptable levels of persistent chemicals and physical contaminants entering the meat they produce.

The risk assessment should be reviewed periodically and updated according to changes in land use and management.

Responses to the risk assessment questions and the map must be documented and filed, and both made available should the property be subject to an LPA audit.

Click here to read about how to and what to record to meet your LPA requirements and find a range of how to guides, examples and templates.

Biosecurity Management Plan (BMP)

One element of the Biosecurity Management Plan (BMP) is an area description, map or plan of the whole or specified part of the premises to which the BMP applies, that accurately describes the boundaries of the premises.

Further information

- Farm planning

Case studies

The following four case studies show how four Victorian small-scale landholders are looking after their farms and their animals by practicing good biosecurity.

High stakes on the highland cattle farm

Erica breeds Highland cattle on a 5 acre farm in Traralgon. Erica shows her cattle and runs events to connect people with learning disabilities to nature and agriculture.

Watch the video to learn how Erica is keeping her cattle safe.

Safeguarding the genetics

Nat and Jono run a regenerative farm in Blampied where they have British White cattle, Berkshire pigs and Finn sheep on 148 acres of rich volcanic soils.

Watch the video to learn how Nat and Jono are keeping their pigs safe.

Not kidding with biosecurity

Rhonda has a small goat dairy farm in Drouin, where she looks after a variety of goats, including Nigerian Dwarfs and Dairy mix breeds as well as one Saanen Goat on her 5 acre property.

Watch the video to learn how Rhonda is keeping her goats safe.

Protecting alpacas

Lynda operates a young and progressive alpaca and miniature donkey stud in Belgrave South. Her farm is home to between 50-80 alpaca and a small herd of donkeys on 20 acres of highly productive pasture.

Watch the video to learn how Lynda is keeping her alpaca's safe.

Have safe practices

Biosecurity and farm safety

This newsletter series has covered a range of biosecurity topics that are relevant to small landholders. While biosecurity is often thought of in the context of diseases that affect livestock or crops, farm biosecurity measures also protect farmers and those working in agriculture.

Farm safety for small landholders

Farms, including small landholdings, are often both a workplace and home for many families making them unique environments.

According to WorkSafe Victoria, agriculture is overrepresented in workplace fatalities, accounting for approximately 14 per cent of workplace deaths despite making up just two per cent of the state's workforce.

Children are often a part of the farm workplace environment, either by helping with jobs, using the farm for recreation, or visiting friends and family. AgHealth Australia has found that one third of fatalities on farms are children under the age of five, and that children under the age of 15 represent 15 per cent of all farm-related deaths in Australia.

As a small landholder, you may be actively farming, retired, self-employed, have employees, or manage a piece of land for recreational purposes – no matter which, you have legal health and safety duties to:

- Ensure your farm or property is a safe working environment without risks to the health of your employees. Employees can include contractors, vets, plumbers, electricians, or shearers.
- Make sure activities don't expose anyone including your family, other workers, visitors, and contractors to health and safety risks.
- Ensure people can safely enter and leave the farm or property, and without risk to their health.
- Report work related notifiable incidents to WorkSafe Victoria.

Understanding the risks

As a small landholder, it is important to understand the hazards that come with owning and running a farm.

Understanding the hazards allows you to assess the risks and create simple systems to manage them. The main areas of risk on Victorian farms are:

- Operating quad bikes, side-by-sides, tractors, and their attachments
- Handling large livestock, in particular cattle, sheep, and horses
- Working in confined spaces like silos, milk vats, and tanks
- Using chemicals like cleaning agents, pesticides, and herbicides
- Working around electricity, for example, working near overhead powerlines and operating equipment like pumps near water.

Identifying the hazard and mitigating the risk

The most effective control measure involves eliminating the hazard and its associated risk. For example, by doing the work at ground level with appropriate equipment.

Reducing the risk through substitution, isolation, or engineering controls

If it is not reasonably practicable to eliminate the hazards and associated risks, these can be minimised by:

- Substituting the hazard with something safer. For example, you can use a cordless drill instead of an electric drill or use water-based paints instead of solvent-based paints.
- Isolating the hazard. For example, installing fences and barriers around effluent ponds or other water sources that children could access.
- Putting engineering controls in place. Control measures could include using a mechanical device or process. For example, a trolley or hoist to move heavy loads or speed restrictors on quad bikes and side-by-side vehicles.

Reducing the risk using administrative controls

Administrative controls are work methods or procedures designed to minimise exposure to a hazard. For example, developing procedures for the safe operation of machinery, or installing signs like children playing or overhead powerline to warn people about hazards.

Reducing the risk by using personal protective equipment (PPE)

Personal Protective Equipment (PPE) is equipment worn to minimise risks to health and safety. PPE can include high visibility clothing, safety footwear such as steel-capped boots, sunscreen, gloves, helmets, hard hats, sunhats, hearing protection, or goggles.

How can you improve farm safety on your farm?

Small landholders can protect family members, workers, and visitors to their property by:

- Providing a safe play area for children and ensuring they are always supervised by an adult.
- Providing an induction that could include a tour of the property with a detailed map that includes the location of first aid kits, location of an incident/injury register, no-go zones, and safe play areas.
- Becoming familiar with the safe operating procedures for machinery, ensuring that safety guards are always in place and that regular maintenance is undertaken.
- Ensuring that children under 16 years of age do not operate quad bikes

Personal health and hygiene

There are simple things you can do to protect yourself and your family from zoonotic diseases:

- Wash hands with soap for 10–20 seconds under running water after handling animals and before preparing or eating food/drink.
- Use hand sanitisers, such as alcohol-based hand rubs, where there is no water.
- Promptly treat cuts or abrasions.
- Talk to your doctor about a vaccination for key zoonoses, for example Q fever.

Resources

- Agriculture Victoria provides information about agricultural and veterinary chemicals including information about applying for an agricultural chemical user permit (ACUP)
- Listen to the AgVic Talk Smarter Safer Farms podcast season to learn more from farmers who have experienced farm health and safety challenges.
- WorkSafe Victoria offers a complete range of occupational health and safety (OHS) services including emergency response, advice, information and education, inspections and audits, licensing and certification, publications, and online guidance. For general advice relating to farm safety, please visit WorkSafe.
- Energy Safe Victoria is Victoria's energy safety regulator, responsible for electricity, gas, and pipeline safety. ESV also provides specific information about overhead powerlines on farms.
- Safework Australia – How personal protective equipment helps to manage risks
- Victorian Government – BetterHealth Channel

Find out more about making your farm safer

- Kidsafe Victoria provides free farm safety resources including the Parent's Guide to Kidsafe Farms and the Farm Safety Checklist.
- Making our Farms Safer provides free safety resources and safety advice. Contact the safety team for a Farm Safety Consult, Farm Safety Walk and Talk, or a Health and Safety Management Systems Review or call 1300 882 833 for more information.
- The National Centre for Farmer Health delivers Shifting Gears a teacher led intervention program and farm health and safety extension resource for schools.
- Standards Australia provides information about Australian Standard AS 5340:2020 Loading/unloading ramps and forcing pens
- AgHealth Australia is a research activity group within the School of Rural Health at the University of Sydney investigating non-intentional fatal and non-fatal incidents occurring on farms across Australia.

Fire Preparedness

Why do I need a fire plan?

The characteristics of every farm and farm business are different and each farm requires a unique approach to fire preparedness.

Fire can affect properties rapidly and cause devastating impacts.

Developing a fire plan and completing the tasks identified within it, will assist farmers, land managers and small-scale landholders to be better prepared and recover faster, should their property be affected by fire.

A fire plan can help to protect your home, livestock, and vital farm infrastructure. A plan will also help identify the timing of activities so they can be undertaken at the appropriate time.

It is important to review the plan annually and again during periods of high fire risk.

Your fire plan is also an important part of good backyard biosecurity and can be developed as part of your farm biosecurity plan.

Take the Emergency Preparedness Quiz – a 10-minute quiz to help farmers review their farm emergency preparedness and prioritise a list of follow-up actions.

Take the Evaluate Your Farm Water Supply System Quiz to help you evaluate your farm water supply system and plan improvements.

Fire Preparedness Toolkit

Agriculture Victoria's Fire Preparedness Toolkit will help farmers and small-scale landholders to prepare their farm for the fire season.

Learning from the experiences of farmers previously impacted by fire, the toolkit contains simple checklists and templates to help you prepare your farm business, livestock, staff, and infrastructure ahead of the fire season.

The toolkit includes key things that when identified as part of a preparedness plan, can ease the process of recovery after a traumatic bushfire experience. For example, having a written farm asset inventory will assist in reviewing insurance coverage before, as well as assessing loss and damage after a fire. In addition, securely storing farm documents (on the cloud or off-farm) and on-hand, will help ease the pressure when it comes to seeking financial support or making insurance claims.

The Fire Preparedness Toolkit and other bushfire resources are available on the Agriculture Victoria website and should be used in conjunction with existing information and resources from the Country Fire Authority (CFA) and your local council.

For more information, listen to the Farm Fire Preparedness webinar (passcode: Preparedness) or watch the Managing Fire Risk on Farms - tools, tips, resources, and a Seasonal Update webinar (passcode: Climate).

Order a hard copy of the toolkit or email us.

Farm mapping

Have you included a farm map in your fire preparedness plan?

A good farm map should include the measurements of internal and external fences which is useful for insurance purposes or recovery if fences are damaged.

Biosecurity features on a farm map might include entry/exit points, quarantine areas, stock containment areas, double-fenced areas, public access areas, stockyards, feed storage areas, parasite/pest sites, machinery shed(s), chemical storage shed, chemical/fuel/oil spillage area, wash down area, power poles, animal treatment sites, effluent disposal area, stock disposal, rubbish dumps, dog kennels/chook yards.

A farm map is an essential aspect of your farm biosecurity plan and a requirement for your LPA property risk assessment and Biosecurity Management Plan.

Agriculture Victoria's 'Biosecurity How-to webinar' series, has a recorded session on using the Google Maps tool (passcode: Biosecurity2022).

More information is also available in the Backyard Biosecurity How to do a farm map newsletter.

Emergency access

Will emergency services know where to come in the event of a fire?

As part of your fire season planning, make sure roadside numbers are visible, vegetation around gates, culverts and bridges is clear, and gates are as wide as possible and easy to open.

Animal welfare

Where will you place your livestock during an emergency?

It's crucial to have a refuge paddock or stock containment area ready for your livestock with adequate feed and water for their safety before fire season and for use on days with a fire rating of high or above.

Use the Fire Preparedness Toolkit and web resources to start planning for stock containment areas, emergency feeding and water budgeting.

Further information

Visit the Agriculture Victoria website:

- Preparing your farm for bushfire
- Recovery after fire
- Updating your Property Identification Code (PIC)
- Stock containment for emergencies

Subscribe to the Recovery & Resilience e-newsletter for regular information on events and support information.

Other resources

- Visit the Vic Emergency website to create a watch zone
- Visit the CFA website for warnings and restrictions
- Visit the CFA website for more information on how to prepare your property and decision-making
- Meat and Livestock Australia (MLA) have produced several resources to assist with bushfire preparedness on farm – visit the MLA bushfire hub for eLearns, fact sheets and supporting resources.

Animal Welfare

What is animal welfare?

Animal welfare is the responsibility of everyone involved with animals.

'Animal welfare' can be described as how an animal is coping with the conditions in which it lives. Good welfare can be achieved through:

- Proper and sufficient food and water
- Adequate shelter and comfort
- The ability to express innate behaviour and experience positive mental states
- Protection from, and rapid diagnosis of, injury and disease
- Handling, husbandry, and slaughter/ killing techniques that minimise pain and distress
- Protection from states of pain, fear, and distress.

Why worry about animal welfare?

Animal welfare matters because:

- All Victorians expect animals will be treated with care and respect.
- You or anyone caring for your livestock are required to provide care.
- Poor animal welfare impacts on production.
- Animal welfare issues jeopardise the reputation and credibility or farmers and landowners and may be a source of tension between neighbours.

Develop an animal health and welfare plan

Your on-farm biosecurity plan should define your animal health and welfare responsibilities. Landholders who are accredited under the Livestock Product Assurance program must meet specific animal welfare requirements.

You can work with your farm consultant/veterinarian or local Agriculture Victoria Animal Health Staff to assess the welfare of your livestock and to develop a plan to improve areas where welfare issues are identified.

An animal health plan could include:

- Feed – ensuring supplies of proper and sufficient feed to meet your animal's needs.
- Water – adequate and accessible drinking water.
- Preventive health treatments – vaccination, drenching.
- Monitoring, supervision and veterinary treatment – providing a prompt response when animals need extra care.
- Shelter – protection from climatic extremes
- Annual shearing for non-shedding sheep, alpacas and some goats.
- Separating entire males and females to prevent indiscriminate and inappropriate mating.
- Seeking further training to improve knowledge and skills.
- Appropriate equipment and infrastructure will make achieving these things much easier, e.g. water troughs, fencing, handling facilities, artificial shade structures.
- It is also important to recognise when to cull or euthanase animals in your care to prevent excessive stocking rates or prolonged suffering. If your circumstances change and you can no longer provide the care your animals need, it is important to reduce your stock numbers or destock.

Animal welfare legislation and Codes of Practice

Ensure you and your staff are familiar with relevant animal welfare legislation, Standards and Guidelines and Codes of Practice for the species kept on your property.

- *Prevention of Cruelty to Animals Act 1986*
- Australian Animal Welfare Standards and Guidelines

Failure to comply with animal welfare legislation may result in regulatory action being taken.

Reporting animal cruelty

- Agriculture Victoria – investigate matters concerning commercial numbers of livestock (10 or more head). Call our customer contact centre on 136 186 or email us.
- RSPCA – investigates complaints about companion animals and livestock species where there are less than 10 head on the property (for example hobby farm animals).
- DEECA Wildlife – If you find a sick or injured native animals. Call customer contact centre on 136 186.
- Victoria Police – If there has been a road transport accident involving animals (for example a truck rollover) always call the police. Police can also investigate complaints of cruelty.
- Local Government – investigate concerns with domestic animal business or roaming animals

Further information

- Agriculture Victoria – Livestock health and welfare
- Agriculture Victoria – Report animal cruelty

Zoonotic Diseases

What are zoonotic diseases?

Zoonotic diseases are infectious diseases that can pass between animals to humans or humans to animals.

Zoonotic pathogens may be bacterial, viral, parasitic, or other agents that spread to humans through direct contact or through food, water, or the environment. Zoonotic diseases can range from minor short-term illnesses to major life-changing illnesses – some can even cause death.

People most at risk of being affected by a zoonotic disease are those in close contact with animals or animal products, including veterinarians, farmers, abattoir workers, shearers, pet owners, and pig hunters. Children, elderly people, pregnant women, and people with impaired immunity are also generally at higher risk.

Understanding the risks and knowing how to manage zoonotic diseases is an important part of backyard biosecurity and should be included in your farm biosecurity plan.

Some examples of zoonotic diseases include:

Q Fever

Q fever is an infectious disease that produces flu-like symptoms in humans but shows little or no symptoms in animals.

Q fever is spread to humans from cattle, sheep, goats, and wild pigs. People can become infected when splashed with infected body fluids or by breathing infected dust.

Q fever vaccination is highly recommended for people working in the livestock industry. Visit the Victorian Department of Health or the National Centre for Farmer Health for more information.

Figure 1
https://www.cdc.gov/onehealth/basics/zoonotic-diseases.html

Hydatids

In the past, hydatids were a significant cause of illness in Australian rural communities due largely to the practice of feeding offal of sheep to farm dogs, the absence of treatment of tapeworm in farm dogs, and the close physical connection between farmers and their dogs.

Hydatids continue to remain a threat to human health and children are at particular risk due to their close contact with dogs.

When a person becomes infected, cysts may develop in the liver, lungs, or brain and the consequences may be fatal. The only treatment in humans is radical surgery to remove the cysts.

Hydatid disease can be prevented by:

- Worming dogs regularly with an all-wormer that is effective against tapeworm.
- Never feeding raw offal to dogs.
- Promptly disposing of dead stock
- Keeping dogs kennelled or chained when not working, to prevent them from finding offal or dead stock.
- Restricting access of dogs to household vegetable gardens and washing all vegetables thoroughly before consumption.
- Good hygiene, such as ALWAYS washing hands after handling dogs and before eating.

Salmonella

Salmonellosis (or Salmonella) is a disease caused by infection with Salmonella bacteria. Salmonella is usually spread to humans through eating undercooked food made from infected animals (for example undercooked meat, poultry, or eggs). It can also be spread from animals to humans in contaminated manure.

Poddy calves, although friendly, their habits of, licking clothes, sucking on fingers, and wanting to play, can present a significant risk, as carriers of zoonotic diseases including Salmonella and ringworm.

Safe food handling and thorough handwashing can help prevent salmonellosis.

For more information visit the Victorian Government's BetterHealth Channel.

Other zoonoses include (but are not limited to):

- Anthrax
- Avian influenza
- Australian bat lyssavirus
- Brucellosis
- Hendra virus disease
- Leptospirosis
- Psittacosis
- Ringworm
- Toxoplasmosis

Reducing exposure to zoonoses

There are several things you can do to reduce exposure to a zoonotic disease:

- Use personal protective equipment (PPE). The use of PPE is particularly important where contact with animal tissues, faeces or urine is likely, or the risk of infection is high.
- Wear PPE like overalls, gloves, eye protection and masks and take care when assisting or being near animals when they are birthing or are sick.
- Regularly clean and disinfect workspaces and equipment, including PPE, instruments, harnesses, and rugs.
- Children and pregnant women should avoid areas where animals (especially cats) may defecate.
- Dog owners should appropriately dispose of their animals' faeces, especially from public places.

Personal health and hygiene

There are simple things you can do to protect yourself and your family from zoonotic diseases:

- Wash hands with soap for 10–20 seconds under running water after handling animals and before preparing or eating food/drink.
- Use hand sanitisers, such as alcohol-based hand rubs, where there is no water.
- Promptly treat cuts or abrasions.
- Vaccinate for key zoonoses, for example Q fever.

Managing animal health

To maintain good animal health, include the following management practices on farm and keep records in your farm biosecurity plan:

- Keep livestock healthy and vaccinate them for known zoonotic diseases where appropriate. Keep a record of vaccinations and identify any changes.
- Monitor stock health and seek early advice from a veterinarian or Agriculture Victoria animal health officer about unusual sickness or death.
- Regularly worm pets as appropriate.
- Control pest animals such as rats, feral pigs, wild dogs, and feral cats that may spread zoonotic diseases.
- Practice good hygiene with livestock feeds and prevent access from rodents and cats.
- Isolate and treat sick animals to reduce the risk of spreading disease to other animals and humans.
- Dispose of carcasses and afterbirth appropriately to prevent the spread or recurrence of diseases.

I suspect a zoonotic disease – what do I do?

Report any unusual signs or suspected cases of an emergency animal disease immediately to the Emergency Animal Disease Hotline on 1800 675 888. Early reporting increases the chance of effective control and eradication.

Seek urgent medical attention for suspicious signs of zoonotic disease – if you live or work with livestock or wildlife inform your doctor so they can check for zoonotic diseases.

For human health advice, visit your GP, closest public health unit or the Victorian Government's BetterHealth Channel – ensure you advise medical staff that you have been in contact with livestock or animals.

Further information

- Animal Health Australia – Zoonotic Diseases
- Australian Q Fever Register – About Q Fever
- Farm Biosecurity – Are you zoonosis aware?
- Safework Australia – How personal protective equipment helps to manage risks
- Victorian Government – BetterHealth Channel

Pest animals

You and foxes have one thing in common – you both love your chickens!

Yes, foxes and other pest animals are frequently a problem on small properties, not to mention local farms.

Pest animals such as wild dogs, foxes, rabbits and feral pigs can cause significant damage to crops, spread disease, seriously affect our livestock industries and threaten the survival of native plants and animals.

All up they have an impact of around $743.5 million each year in Australia.

The big four pests on small farms are generally considered foxes, rabbits, wild dogs and feral pigs.

Let's have a closer look at these...

Red Fox

Foxes are one of Australia's most serious pest animals. Not only do they prey on livestock and native animals, but they also have the potential to spread exotic diseases, including rabies, which would seriously threaten livestock, wildlife and human health should it enter the country.

Footprints, fox scats (poo) and sadly missing chickens are all signs you have foxes nearby. Their urine also has a unique musky smell as well.

The most efficient way to reduce the impact of foxes is to conduct a strategic coordinated program over several landholdings.

Control methods will be limited in populated areas, but some things you can think about are trapping, baiting, shooting, exclusion fencing, guardian animals and managing food sources like dog food and scraps. An integrated pest management approach is recommended that combines the use of all suitable control tools.

Agriculture Victoria has developed a video series to explain how to implement effective fox management programs, at the right times and to the right standards.

To learn more and watch the videos, visit integrated fox control for further information

See Red Fox for more information about their characteristics and behaviour.

Rabbits (feral)

European rabbits cause significant damage to the environment and agriculture.

They destroy pasture, crops and plant communities that impacts agriculture and the environment, contribute to soil erosion, compete with native fauna for food and habitat and promote the establishment of weed infestations. Rabbits are well suited to Australian conditions and breed prolifically.

Populations as low as one rabbit per hectare can prevent the regeneration of native tree species as they are known to eat seedlings. Without natural recruitment of native seedlings, landscapes change and deteriorate over time.

Some signs of rabbits in your area include scratching, warrens (burrows), damage to seedlings and scats.

Rabbit control is time consuming and there is no quick fix solution. You may be limited in your options in built-up areas, but successful rabbit control programs use a combination of baiting, destroying rabbit warrens (ripping) and follow up fumigation.

Agriculture Victoria has developed a video series to explain the steps of 'the rabbit recipe' and how to achieve long term rabbit control by implementing management programs at the right times and to the right standards.

To learn more and watch the video, visit integrated rabbit control.

Wild dogs

Any wild living dog found on private land or on public land adjacent to private land) has the potential to threaten livestock. In Victoria, the feral and wild populations of dog (commonly referred to as wild dogs) are declared as established pest animals under the *Catchment and Land Protection Act 1994* in recognition of the threat these animals pose to livestock and production on private land in rural Victoria.

The dingo is protected in Victoria on most areas of public land and cannot be taken or killed without an authorisation to do so. Dingoes are protected as a threatened species under the *Wildlife Act 1975* and the Flora and Fauna Guarantee Act 1988. Lethal dingo control is only permitted within Victoria's unprotection zone. This zone excludes north west Victoria. It is difficult to distinguish between a wild dog and a dingo without DNA testing. Penalties apply for the destruction of wildlife. For more information refer to www.wildlife.vic.gov.au/our-wildlife/dingoes

To allow the continued control of wild dogs where they threaten livestock production, the dingo has been declared unprotected on private land and along the boundaries of public land in wild dog management zones.

Wild dog attacks can have a devastating impact on livestock, wildlife and pets, and can be a traumatic experience for those involved.

Research has also shown that peri-urban wild dogs can carry zoonotic pathogens, which can pose a significant risk to public and livestock health.

The primary agricultural impact of wild dogs is stock losses. Sheep are not the only livestock attacked by wild dogs, often cattle and goats are also targeted.

The wild dog control program works with the community, industry and government to develop annual wild dog management zone plans to effectively reduce the impacts of wild dogs using all available tools. In north west Victoria landholders are not permitted to use lethal control.

Recommended control measures include non-lethal controls such as fencing, animal husbandry, guardian animals and olfactory methods and lethal controls such as trapping, shooting, and baiting. Integrated pest management using all available control measures implemented in a coordinated manner at a landscape scale is the best control method to protect livestock from predation.

Domestic dog attacks on livestock can also be a serious problem in small landholdings. As a dog owner, you are liable if your dog attacks a person or another animal, so make sure your dogs are secured, especially at night.

Further information

- Wild dog (feral or wild)
- Integrated wild dog control
- Managing wild dogs in Victoria
- Dingoes

Pig (feral or wild)

Feral pigs are found at several locations throughout Victoria, though their populations are mostly isolated and occur at relatively low densities.

Feral pigs cause significant damage to Victoria's environment and agriculture.

They compete for resources, damage crops, reduce stock water quality, and can even predate on young livestock.

Feral pigs also pose a significant biosecurity risk as they can spread exotic animal diseases like foot-and-mouth disease or African swine fever should they ever enter Australia.

Recommended control measures include baiting, trapping, ground shooting and exclusion fencing. Like any pest, using a strategic pest management plan using multiple control tools implemented in a coordinated manner at a landscape scale provide the best results.

Agriculture Victoria has developed a video series to explain how to implement effective feral pig management programs at the right times and to the right standards.

To learn more and watch the videos, visit integrated feral pig control.

Start planning your pest management program today

Pest animal control is most effective when done in collaboration with your neighbours, so be sure to check in with your neighbours and work together. Depending on your control method, you also may have a legal obligation to inform your neighbours.

It's also important to know if your program is having an impact, so monitoring for pest animals using trail cameras and looking for tracks and scats is a valuable exercise.

Further reading

- Agriculture Victoria 'Priority pest animals'
- Agriculture Victoria 'Invasive animal management'
- Agriculture Victoria 'Victorian fox and wild dog bounty'
- The PestSmart website
- FeralScan – a free resource to record pest animal activity, evidence of pests, pest damage and control actions.
- Victorian Rabbit Action Network

Weeds

Weeds are unfortunately a part of land ownership and it's good to keep on top of them. Weeds species are significant biosecurity problems in their own right, as well as being alternate hosts of some agricultural and horticultural pests. Some weeds can also make livestock sick.

Impact of weeds

Weeds can have a destructive impact on agriculture and the environment. Some can also cause severe illness in both people and animals.

Many weeds are very invasive and can spread quickly across large areas of land and water.

If left unchecked, weeds can outcompete native plants for resources, reduce the quality of farming land, and alter fire patterns, water flow, nutrient cycling, and wildlife diversity.

Weeds can be introduced or spread in many ways, including via:

- water
- wind
- stock feed
- animals, including farm animals, wild animals, and pets
- machinery like tractors, harvesters, cars, and trucks
- deliberate introduction (e.g., willows planted for bank stabilisation)
- earth material like soil, sand, gravel, and rocks
- plant materials like wood chips, mulch, potted plants, and seeds
- Illegal or accidental sale in places like nurseries, markets, and online
- escape from gardens.

Controlling weeds

Weeds can be controlled in several ways and there are lots of tools and resources available to help you plan a weed control program on your property.

It is best to control weeds before they have a chance to seed or spread.

Different types of weeds grow, flower, and go to seed at different times of the year or in different weather conditions. It is important to identify the type of weed so you can work out when is the best time to treat and control it. For example, it is best to treat blackberry between September and April but best to treat caltrop (bindii / cat head) between October and December or March and May.

It is a good idea to get out and have a walk around your property regularly to look for weeds, particularly around watercourses, boundaries, and areas where the soil has been disturbed or new materials like soil or mulch have been brought in.

If you notice any new or suspect weeds, you can check the Agriculture Victoria Weeds Information page for tips on identification and control. You can also talk to an agronomist, someone from your local Landcare group, or if you want advice about using herbicides contact staff at shops that sell agricultural chemicals.

There are different control methods available depending on the type of weed, the situation it is in, and what you prefer as the manager of the land. These include:

- hand pulling and hoeing
- spraying with herbicides
- strategic grazing
- pasture management
- avoiding bare soil
- biological control agents
- cultivation
- slashing
- mulching

Not all methods are suitable for all species of weeds and in some cases, a method that works well for controlling one type of weed can cause other weeds to grow or spread faster. Making sure you know what weed you're dealing with is key to an effective control program.

Weed control is a community effort

Many weeds are so widespread that they cannot be completely removed from the landscape. We can however manage them to minimise problems and impacts on the environment, farmers, and the community. Every person or organisation who owns or manages land in Victoria is responsible for the control and management of weeds on their land (except for state prohibited weeds – see below) Everyone in the community needs to work together and do their part to make sure that weeds can be kept under control for the long term.

Local community groups, such as Landcare, are a valuable source of information and advice on weed control activities that you can participate in. Victoria also has several community-based groups who work with Victorian communities and government agencies to control certain types of weeds. These include the Victorian Blackberry Taskforce, the Victorian Serrated Tussock Working Party, and the Victorian Gorse Taskforce.

State Prohibited Weeds

State prohibited weeds are high risk weeds that either are not found in Victoria, or which have only been found in very small numbers and so could still be eradicated. Unlike widespread weeds, it is Agriculture Victoria's responsibility to manage and control State prohibited weeds, no matter where they are in Victoria.

Public reports are important to help Agriculture Victoria find and eradicate State prohibited weeds. By looking out for and reporting them, you can help protect Victoria from these high-risk invasive plants.

Report a State prohibited weed to Agriculture Victoria by:

- calling 136 186
- completing the online report form
- email us

Further information

For more information, check out Agriculture Victoria's state prohibited weeds page or have a look at the High Risk Invasive Plants YouTube playlist.

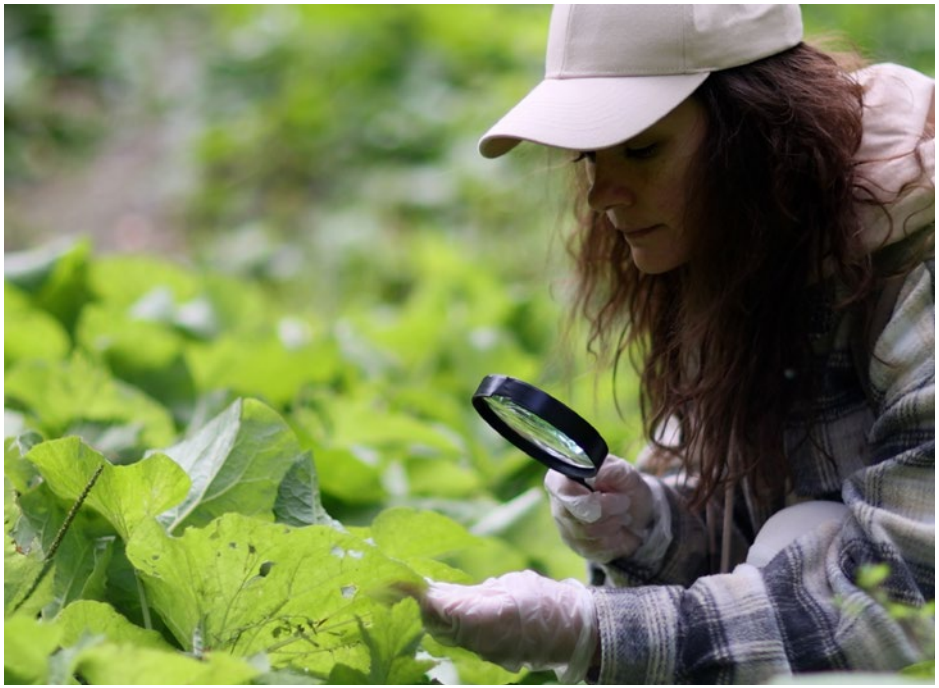
The Weed Spotter Program

Weed Spotters assist Agriculture Victoria by looking out for and reporting state prohibited weeds. The Weed Spotters program is for people who do jobs or activities where they spend time in places where these weeds could be found. This includes people such as contractors, horticulturalists, landscapers, consultants, and staff from agencies such as Parks Victoria, Catchment Management Authorities, and local councils. There is training available through the Weed Spotters program about state prohibited weed identification and how to make a report.

If you would like to become a Weed Spotter, phone 136 186 or email us and provide your name, postal address, daytime phone number, email address and any industry or other relevant group affiliation.

Alternatively, you can click on the email subscription link below to provide your details to Agriculture Victoria and become a Weed Spotter.

Sign up to become a Weed Spotter.



Marine pests

Marine pests in our bays and waterways can adversely affect aquatic habitats, food chains, the ecosystem, and our enjoyment of the marine environment.

An example of how quickly marine pests can invade native marine environments in Victoria is the Northern Pacific Seastar (*Asterias amurensis*). This invasive species was first reported in Port Phillip Bay in 1995; populations established so successfully that five years later numbers in Port Phillip Bay were estimated to be well over 100 million individuals.

Marine pests in Victoria

Marine pests are highly invasive, non-native animals and plants that can cause significant harm to Victoria's marine environment. These pests can include a wide range of organisms, such as sea stars, seaweed, crabs, mussels, fish, sea squirts, amongst others.

Where marine pests come from

Marine pests can arrive in Victoria from other parts of the world or even other Australian waters. Many of them can arrive:

- as unwanted tourists attached to the hulls of ships that visit our ports.
- as larvae in ballast water.
- accidentally through the aquarium trade

Learn more about how you can reduce the spread of marine pests.

Why marine pests are a problem

Once introduced, marine pests reproduce quickly, often producing large numbers of offspring that can rapidly spread to new areas.

They compete with native species by preying upon them, and outcompeting them for space, light, food, or overgrowing them.

They can also introduce diseases and parasites to our native species, and clog internal pipework resulting in overheating and damage to boat motors.

Because of their invasive nature, marine pests pose a significant threat to our marine native biodiversity and economy. Once marine pests become established, it is nearly impossible to eradicate them.

Established marine pests in Victoria

The following are high-risk marine pests that are known to be already established in parts of Victoria:

Northern Pacific Seastar (*Asterias amurensis*)

An invasive species of seastar currently present in Port Phillip Bay. It is characterised by having five arms with pointed upturned tips and being yellow/orange with purple markings. It can grow up to 50 cm across when fully mature. It is normally found in bays, estuaries, and reefs in habitats, such as seagrass, mussel beds, rock pools and rocky reefs, and artificial structures, such as marinas and ports.

During the cooler months, individuals aggregate to spawn, so numbers tend to be higher at a single location.

This is an aggressive predator of native and commercially important species including scallops, mussels, and oysters. Not only does it pose an ecological threat to biodiversity, but it also has an economic impact by affecting the aquaculture and fisheries industries.

Wakame (*Undaria pinnatifida*)

An invasive seaweed that is established in Port Phillip Bay, Apollo Bay harbour, Port Welshpool and Portland. Its main features are the presence of a frilly growth, known as sporophyll, at the base, a well-defined stipe that extends through the whole length of the blade as a mid-rib, and smooth, thin blades that finish before the base of the plant. The colour ranges from green to golden brown, with the stipe being lighter coloured.

This species is more commonly found during the cooler months, from low tide mark to 20 m in habitats such as rocky reefs, aquaculture equipment and hard surfaces, such as boats which accidentally transport It around the state. Wakame can rapidly take over areas previously devoid of large algal species.

Asian Shore Crab (*Hemigrapsus sanguineus*)

An invasive crab present in Port Phillip Bay. It can be identified by the banded patterns on its walking legs, the three spines on each side of the eyes and the spots on its claws. The shell can grow to up to 4cm wide and is characterised by having a squared shape and a colour that goes from green-purple to orange-brown.

It can be found in exposed rocky coasts, estuaries, and shallow waters, on a range of surfaces including shells, beneath rocks and artificial structures.

This species can outcompete native species and preys on crabs and shellfish, mainly oysters and mussels.

What can you do to help?

Although marine pests can spread naturally, they are normally transported around Victoria on the hulls of vessels or in areas and equipment that are not cleaned and dried properly.

Everyone can play a part in reducing the introduction and spread of marine pests and protecting Victoria's marine environment. Some of the ways that you can help are:

- Remembering to 'Check, Clean, Dry' boats and fishing, diving, snorkelling and surfing equipment that has been in the water.
- Joining local volunteering groups with an interest in marine biosecurity
- Keeping an eye out for unusual marine species and reporting suspected marine pest sightings to us.

Visit the Agriculture Victoria website and download a copy of Victoria's Marine Pest Deck to learn more about high-risk established and exotic species that can affect Victoria's unique marine environment and industries.

Biosecurity Basics

Stories on how people can build biosecurity into their day-to-day farming practices.

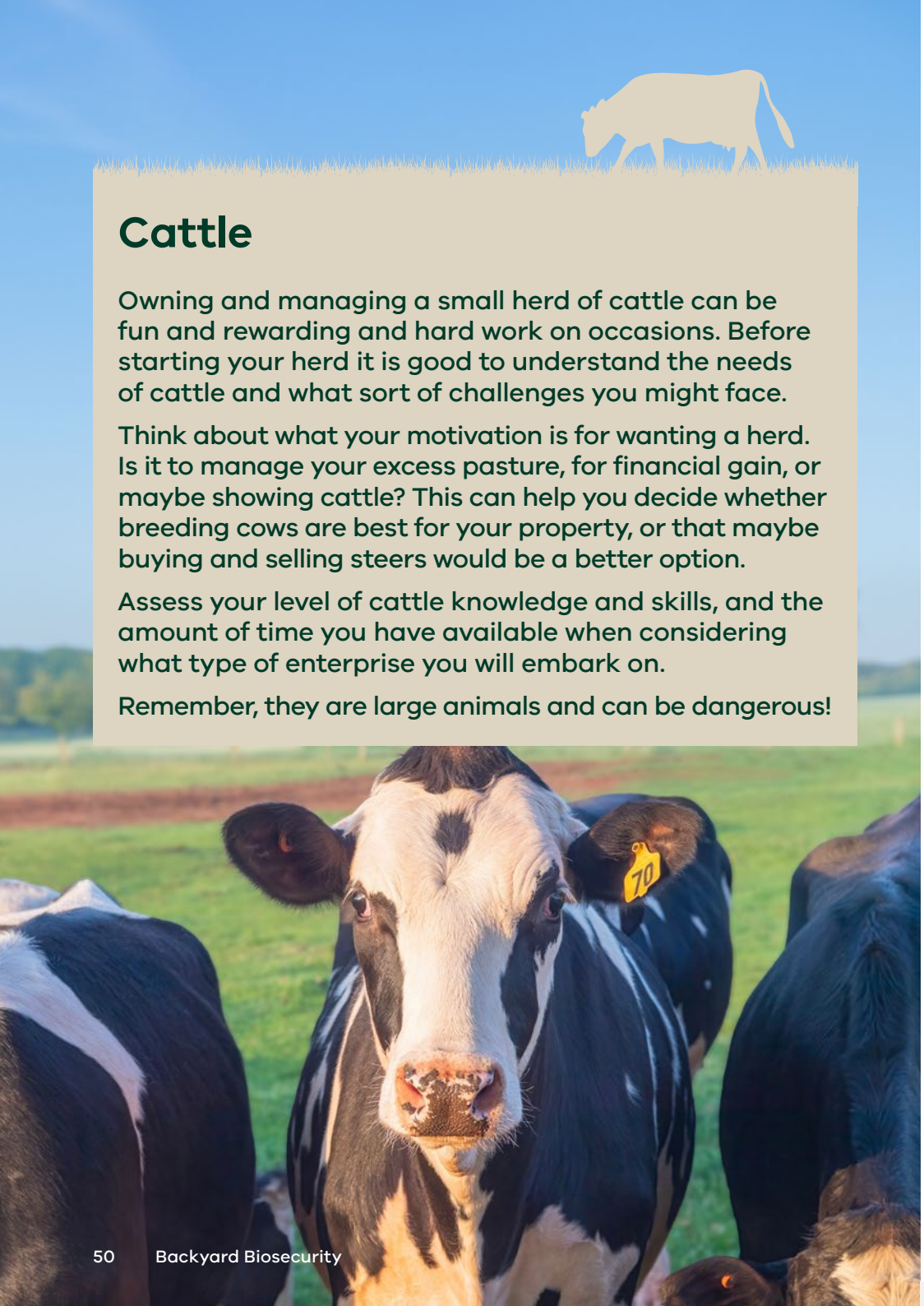
We all play a role in keeping Victoria safe from biosecurity risks.

To help all Victorian's play their role, this podcast season 'Biosecurity basics' takes a deep dive into the fundamentals of biosecurity, including practical things listeners can put in place to play their part in protecting our animals and environment.

This season has been produced by Agriculture Victoria in collaboration with RSPCA Victoria.

Find out more about Agriculture Victoria's work on managing biosecurity in Victoria.

- **Introduction with Ros Spence, Minister for Agriculture**
- **Episode 1: Biosecurity Basics with Erica Smith and Richard Smith**
- **Episode 2: Farm with a Difference with Jill Noble**
- **Episode 3: Common questions about biosecurity with Rachael Laukart and Brett Davidson**
- **Episode 4: Buying and selling livestock 101 with Ben Fahy**
- **Episode 5: Designing a farm map with Clem Sturmfels and Ian Powell**
- **Episode 6: Introducing new livestock with Geoff Kroker, Brett Davidson and Rachael Laukart**
- **Episode 7: Tips for feeding your alpacas with Taryan Matthews**
- **Episode 8: Biosecurity management plan with Hannah Manning and Ben Pickles**
- **Episode 9: Feeding cattle with Brett Davidson and Rachael Laukart**
- **Episode 10: Winning the battle with weeds with Jacob Pearce**
- **Episode 11: Keeping your chickens happy and healthy with Cathy Ronalds and Dianne Phillips**
- **Episode 12: Raising happy and healthy pigs with Regina Fogarty and Deb Hancock**



Cattle

Owning and managing a small herd of cattle can be fun and rewarding and hard work on occasions. Before starting your herd it is good to understand the needs of cattle and what sort of challenges you might face.

Think about what your motivation is for wanting a herd. Is it to manage your excess pasture, for financial gain, or maybe showing cattle? This can help you decide whether breeding cows are best for your property, or that maybe buying and selling steers would be a better option.

Assess your level of cattle knowledge and skills, and the amount of time you have available when considering what type of enterprise you will embark on.

Remember, they are large animals and can be dangerous!

Cattle snapshot

Feeding and Nutrition

It is important to ensure you are feeding your cattle adequately.

Did you know?

- Adult cattle require at least 1 hectare of land per head, however this will vary widely on quantity and quality of pasture available.
- At certain times of the year, cattle need to be supplementary fed to ensure they are receiving adequate nutrition.
- Cattle eat roughly 2.5 percent of their body weight each day in dry matter
- For a 600 kg cow, this means she will eat 15 kg of dry matter which is 75-100 kg of green standing pasture.
- Like all animals, for good health, cattle need a diet consisting of the right amount of energy, fibre, protein and vitamins and minerals.
- Cattle drink up to 50 litres of water per day.
- When cows are lactating, they can drink up to 80-100L/day.
- Watch out for blue-green algae blooms in summer in drinking water as they can be harmful to stock.

Before purchasing your first cow, ensure you have enough land and a plentiful, clean water supply, and the ability to provide supplementary feed.

The Feeding Livestock website brings you reliable, science-based information and specialist tools to help you plan and manage feeding of your stock. We've put all the key resources in one place for easy access, including our popular Drought Feeding and Management of cattle and Drought Feeding Management of Sheep books.

Depending on seasonal conditions, you may need to supplementary feed your cattle with hay, grain and/or pellets. Grains and pellets need to be introduced gradually over a period of 7-10 days and stock monitored to avoid animal health issues such as grain poisoning (acidosis).

If you are purchasing stockfeed, ensure the supplier provides a Commodity Vendor Declaration (CVD), and inspect the stockfeed on arrival to ensure it matches what you ordered. If the feed is damaged or contaminated, it is recommended to dispose of it. Store stockfeed in a manner that prevents contamination by livestock, vermin, feral and domestic animals, and other feed.

If you are hand rearing young poddy calves that need milk, follow the instructions on the bag of milk replacer to make sure they are fed an adequate amount. Ensure they have access to water and hay at all times.

Handling and management

Having cattle on your property is an investment and you will need suitable yards and fencing. Yards are important for managing and monitoring livestock health.

Good fencing is important for confining livestock to where they need to be, for managing grazing of pastures, and ensuring they do not access environmentally sensitive areas such as waterways.

You can find handling and management resources on Agriculture Victoria's website.

Cattle are large, heavy animals that can move quickly. There are risks to your health and safety when working closely with cattle that you need to understand. Even the most experienced farmers get hurt.

Learning 'low stress cattle handling techniques', having well-designed and maintained stock yards and handling equipment and knowing how to use them, and only breeding and/or keeping cattle with good temperament, can help reduce the risks.

Children and visitors to your farm not familiar with cattle handling should be kept at a safe distance from cattle and certainly not be permitted to go into yards with them.

Worksafe Victoria has a guide to managing risks in cattle handling.

Have a listen to this AgVic Talk podcast, where Sarah McLean, a young beef farmer near Warrnambool, talks about a near miss while working in the cattle yards that prompted her to think more carefully about farm safety.

Health and disease

Livestock owners have a duty of care to their animals, which includes providing treatment when sick and injured, providing sufficient food, water, shelter, and adequate fencing.

All livestock owners also have a duty to help protect Australia's valuable livestock industries from exotic animal diseases, that is, diseases that we do not have in this country. More than 70 percent of Australia's livestock products such as meat and wool are exported overseas. Those overseas markets are vital for the social and economic well-being of our livestock industries.

Australia is extremely fortunate to be free from many exotic animal diseases such as foot-and-mouth disease, lumpy skin disease and mad cow disease, which are found elsewhere in the world. An outbreak of foot and-mouth disease would result not only in potentially serious impacts to the health and welfare of many livestock, but also the immediate closure of most export markets which would have a devastating impact on our farmers and rural communities. We encourage you to learn about the symptoms of these important diseases know what to do if you have any concerns about your livestock.

Keeping Australia free from these diseases is a top priority for Agriculture Victoria. Having a Property Identification Code (PIC) is an important way that you can help us to be prepared and manage emergency animal diseases. PICs are also used to support livestock owners during emergency relief and recovery activities.

Anytime you see something you are unsure of when it comes to your cattle health, contact your local vet, your local Agriculture Victoria office or telephone Agriculture Victoria on 136 186. If you suspect a case of an emergency animal disease, report this immediately to the Emergency Animal Disease Hotline on 1800 675 888. More information about emergency animal diseases can be found on the Agriculture Victoria biosecurity website.

Cattle diseases

There are a range of diseases that can impact the health and welfare of livestock. Diseases are generally caused by bacteria, viruses, toxic plants, internal and external parasites and nutritional and metabolic issues.

Common diseases which cattle owners should be aware of and monitor for are:

- Internal parasites such as worms, and external parasites such as lice
- Dystocia (calving difficulties – typically with first calving heifers)
- Pestivirus, also known as bovine viral diarrhoea virus (BVDV)
- Lameness
- Pinkeye
- Diarrhoea/scours

Your veterinarian is an excellent source of information to discuss prevention and management of these conditions. If any of these conditions are suspected or observed in your cattle, seek veterinary attention.

Internal parasites

Many internal parasites can affect cattle, including gastrointestinal worms and liver fluke.

All cattle, even well fed and cared for animals are potentially at risk of being affected by internal parasites. However young cattle are most at risk due to their under-developed immune systems. Other at-risk animals include first-calf heifers and sick or severely stressed animals.

You should have a good understanding of the internal parasites that your herd are at most risk of being affected by and have a regular drenching program in place to manage internal parasites. All animals in the herd are given the drench, whether or not they are affected. Read the instructions on the drench carefully and be aware of withholding periods of different drenches if you are considering selling your cattle.

Drench products can be purchased from your local farm supplies store. Make sure you store and administer drench products according to the manufacturer's instructions. Giving the correct dose is vital to effective parasite control. Drenching cattle usually involves using a drench gun that delivers the correct, predetermined dose into the animal's mouth so you must also have the right equipment, in good condition, to drench cattle. Drenching can also be carried out using a pour-on product that is applied along the back-line of the animal. Talk to your animal health advisor to get the right product for your herd.

Your veterinarian should be consulted on how to develop and implement a program to manage internal parasites in your herd, and what to do to avoid drench resistance.

- Agriculture Victoria 'worm control for weaned stock'
- Wormboss

Vaccinations

Vaccination is an effective way of minimising the impact of a range of bacterial and viral diseases such as black leg, pulpy kidney and tetanus and many other important cattle diseases.

A vaccination plan customised to your farming enterprise and region should be implemented with the assistance of your veterinarian and/or stock health advisor. The main recommended vaccine is either a 5-in-1 or a 7-in-1 vaccine.

If you are breeding cattle, a disease to consider vaccinating for is vibriosis. Vibriosis is one of the most significant infectious venereal diseases affecting cattle in Australia, causing infertility and abortion. All bulls should be vaccinated against this disease. For more information visit Bringing new bulls home from sale.

You can purchase vaccines from your veterinarian and local farm supplies store. Make sure you store and administer vaccines according to the manufacturer's instructions and maintain good hygiene practices. Administering the correct dose at the right location on the animal is vital to effective vaccination. Vaccinating cattle usually involves using a syringe with a needle that delivers the correct dose, usually under the skin (subcutaneous), so you must also have the right equipment, in good condition, to vaccinate cattle.

If you are unsure about how to safely and effectively vaccinate cattle, or don't feel up to administering drench or vaccines yourself, please speak to your veterinarian or local livestock agent for assistance.

Poisonous plants

Some pastures grazed by cattle contain potentially toxic plants. Plants may be toxic in small amounts or have a cumulative effect over time.

Good farm management includes learning to recognise plants in your area that are toxic to livestock, as well as how to remove poisonous plants from pastures or control the conditions under which poisonings are more common.

Many weed species that occur in paddocks may cause issues if cattle eat them. Some important examples include:

- Heliotrope
- Paterson's curse
- St. John's Wort

In some circumstances, several pasture species including Kikuyu, Brassica species, Phalaris, and Paspalum can cause problems.

It is recommended NOT to throw garden cuttings into a paddock where cattle can access them – as many garden plants may be poisonous to livestock, and lawn clippings may contain chemical contaminants such as organochlorines.

Further information

- Become a Meat and Livestock Australia (MLA) member. MLA membership is free to levy-paying producers of grass or grainfed cattle, sheep, lambs and/or goats.
- Join the BetterBeef Network, which provides opportunities for beef producers to access the latest beef research messages and participate in courses that increase skills and knowledge.
- Becoming LPA accredited – The Livestock Production Assurance (LPA) program is the Australian livestock industry's on-farm assurance program covering food safety, animal welfare and biosecurity.
- Visit the Agriculture Victoria Health and welfare web page.

Goats

Here's what you need to know about goats to keep them out of trouble.

Feeding and nutrition

Goats are ruminants, however, unlike sheep and cattle, their preference is to browse bushes and trees.

If goats are not well confined, they will devour your garden flowers and plants if given the chance. A goat's digestive system copes well with a variety of plants but there are many plants that are highly toxic and should be avoided. Common toxic plant examples are azaleas, rhododendrons, lantana, bracken fern and oleander.

Goats should have access to pasture and when you don't have adequate pasture, supplement with a good quality hay. Goats should always have access to clean water.

A common problem for goat health is overfeeding of concentrated feeds like grains and pellets. While it is true that your goats will love it, and eat all of it, these feeds can lead to significant digestive problems and diseases e.g., bloat, ruminal acidosis, enterotoxaemia and urinary calculi in males.

A guide is available to help goat producers recognise and manage goat diseases. Visit Meat and Livestock Australia to download the Goat Diseases – The farmer Guide.

Goat health

Foot trimming

If your goats are only running and feeding on soft surfaces like grass and soft grounds, foot trimming every two to three months is an essential part of goat care. The frequency of hoof trimming will depend on the hardness or abrasiveness of the ground that the goats are grazing or living on.

Overgrown feet can cause an abnormal gait and loss of production; they can put stress on joints, tendons and ligaments and are often painful. Goats with overgrown feet will not be willing to move and consequently will eat and drink less or they may get around on their knees. Poor foot conformation or poor hoof maintenance can lead to other conditions including shelly toe, foot abscess, interdigital dermatitis and footrot. Refer to Browser's Bulletin 6 – How often are you trimming your goat's feet for more information.

Lice

There are two types of lice that affect goats; these include a biting louse (Bovicola caprae, Bovicola limbata and Bovicola crassiceps (exotic to Australia) and a blood sucking louse (Linognathus stenopsis and Linognathus africanus) which lead to itchy skin and hair loss around the head, neck and back.

Goats with biting lice will be seen rubbing against trees and fences, which damages goat fibre and decreases the value of fibre, as well as skin quality. The blood sucking lice will cause reduced weight gain and anaemia.

Infestations of lice often come from new introductions, contact with stray goats, goats that were missed at the last treatment or contact with other goats at shows/ field days/ fence lines. Good biosecurity practices are crucial in managing these risks and should be a key component of your biosecurity management plan.

It is recommended to treat lice in late summer/ early autumn when the lice numbers are at their lowest. The entire herd should be treated twice, 14 days apart and all at the same time, with a product that does not also affect internal parasites.

Liceboss has a wealth of lice management information.

Worms

Goats are very susceptible to worms. Common signs include reduced appetite, weight loss, diarrhoea, lightened gums, lethargy and/or weakness. Debilitated, young and pregnant does are very susceptible, however goats of all ages are easily infected by worms. Severe anaemia followed by death can be caused by a Barber's Pole worm, and diarrhoea is usually seen with Black Scour worms.

It is important to do regular monitoring with faecal egg counts and to know what worm species are on your property and in your goats. Your local veterinarian can prescribe appropriate treatments as not many drenches are registered for goats. Appropriate monitoring and treatment of worms will also help avoid worm resistance in your goats.

Wormboss has a wealth of knowledge on worms, their life cycles and on-farm management practices you can undertake to reduce the effect of worms.

Notifiable Diseases

Two important notifiable goat diseases are Johne's disease (JD), caused by the bacterium *Mycobacterium paratuberculosis* (*Mptb*), and caprine arthritis encephalitis (CAE) caused by a small ruminant lentivirus.

One method of reducing the risk of these diseases is to snatch-rear kids (removal of kids from does immediately after birth). Animal Health Australia and The Goat Industry Council of Australia has developed a set of technical notes for veterinarians on Snatch Rearing and Pre-weaning Kid Management in Goat Enterprises and a similar fact sheet titled Snatch Rearing and Pre-Weaning Kid Management for producers.

The goat industry has also developed the National Kid Rearing Plan to provide additional assistance for producers, to minimise exposure of kids to JD and CAE through potentially contaminated colostrum, milk, water, feed and ground.

Caprine Encephalitis Arthritis (CAE) in Goats

CAE is a virus that is seen more often in dairy goats but can occur in any goat breed. The clinical signs of CAE are varied and include swollen joints, encephalitis (inflammation of the brain), pneumonia, mastitis (hard udder) and chronic weight loss. Most CAE infected goats will show no clinical signs, but they could still be carriers of the virus.

Normally the virus is transmitted through the colostrum and milk, but it can be transmitted by any bodily secretion (saliva, urine, oral etc).

There is a blood and milk test available to check if goats are positive to CAE virus.

Having CAE in your herd will not only lead to several health issues (listed above) but can also lead to a decrease in milk yield and an increase in their Somatic Cell Count, and consequently the production of poorer quality milk.

Buying new goats

Diseases are often spread with animal and people movements. Managing the common farm diseases involves understanding the risks associated with stock and vehicle movement and carefully managing what comes onto your property.

To help you make better buying decisions the goat industry, governments and agents have agreed on a National Goat Health Declaration that encourages potential buyers of goats to ask about the health status of the goat.

The National Goat Health Declaration covers lice, footrot, CAE and Johne's disease. For most diseases a simple "yes" or "no" answer is required, however on Johne's disease you will also need to work out your Assurance Rating.

Read the Goat Health Brochure for more information

Male goats

If you have a male goat kid, but do not intend to breed, your goat should be castrated with either elastrator rings or a Burdizzo when they are between six to twelve weeks old, with pain relief provided. If your male goat kids are older than 3 months, then surgical castration by your vet is the best option with the provision of an anaesthetic and pain relief.

Further information

- Become a Meat and Livestock Australia (MLA) member. MLA membership is free to levy-paying producers of grass or grainfed cattle, sheep and/or goats
- Visit the Meat and Livestock Australia Goats hub
- Becoming LPA accredited – The Livestock Production Assurance (LPA) program is the Australian livestock industry's on-farm assurance program covering food safety, animal welfare and biosecurity
- Visit the Goat Industry Council of Australia website
- Visit the Agriculture Victoria Health and Welfare website
- Subscribe to Browser's Bulletin – a monthly newsletter for goat owners

Sheep

Here are some of the things you need to know to successfully manage a small flock of sheep.

Although sheep are smaller and appear easier to handle than cattle, there are still a number of factors to consider.

Sheep snapshot

- An average female sheep weights around 50-70 kg, this varies with breed.
- Rams will be significantly heavier and can be challenging to handle and dangerous without appropriate yards to restrain them in.
- Lambs ideally weigh 4-6 kg at birth.
- The gestation period is about five months.

Feeding and nutrition

It is important to ensure you are feeding your sheep adequately.

Sheep are ruminants. They have a complex digestive system that allows them to eat feed such as grass and hay which is unsuitable for non-grazing animals such as cats and dogs.

Like all animals, for good health, sheep need a diet consisting of the right amount of energy, fibre, protein and vitamins and minerals.

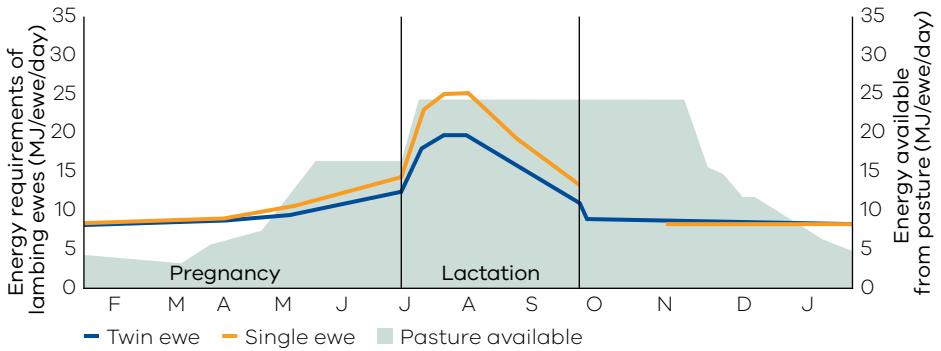
Energy requirements of the ewe vary through pregnancy and lactation. The cheapest and most easily fed sheep food is pasture, therefore the requirements of your sheep should match the available pasture you have, as closely as possible.

Supplementary feed

Depending on seasonal conditions and the number and type of sheep and their pregnancy status, you may need to supplementary feed your sheep with hay, grain and/or pellets. The graph below shows that there may be insufficient pasture particularly in the early months of the year or in Autumn if you are planning for autumn lambing. Grains and pellets need to be introduced gradually over a period of 7-10 days and stock monitored to avoid animal health issues such as grain poisoning (acidosis).

If you are purchasing stockfeed, ensure the supplier provides a Commodity Vendor Declaration (CVD), and inspect the stockfeed on arrival to ensure it matches what you ordered and is not damaged or contaminated. Store stockfeed in a manner that prevents contamination by livestock, vermin, feral and domestic animals, and other feed.

Matching feed requirements of lambing ewes and pasture availability



This graph shows how pasture can meet the energy requirements of winter/spring lambing ewes (50kg). The data is based on a set stocked paddock of 8 DSE. With an autumn lambing, the feed demand and feed availability would generate a 'feed gap'.

Water

Will you be able to provide adequate water for your sheep?

Make sure all your paddocks have a reliable source of water, and that the sheep can access it.

Cattle and horse troughs are unsuitable as lambs and smaller sheep will be unable to reach the water. The amount of water used by animals also varies depending on their breed, type, age and weight. Female stock will have an increased demand during pregnancy and lactation.

Water consumption is also affected by feed type, distances sheep are walking, availability of shade and the quality and temperature of the water.

In winter the water needs are much lower than in summer. For example, a mature sheep on dry feed in summer might use 8 to 10 L per day whilst the same animal on dry feed in winter might use less than 4L per day. For example, 10 adult dry sheep during winter would need 4 litres per head per day. This equates to 280 litres per week or 1,240 litres per month. To calculate the water requirements for your sheep visit the sheep water calculator.

Hand rearing lambs

If you are hand rearing young lambs that need milk, follow the instructions on the bag of milk replacer to make sure they are fed an adequate amount. Ensure they have access to water and hay at all times.

Further information

The Agriculture Victoria Feeding Livestock website provides reliable, science-based information and specialist tools to help you plan and manage feeding of your stock. We've put all the key resources in one place for easy access, including our popular Drought Feeding and Management of Cattle and Drought Feeding and Management of Sheep books.

Handling and management

Good fencing is important for confining your livestock to where they need to be, for managing grazing of pastures, and ensuring they do not access environmentally sensitive areas such as waterways.

Having suitable sheep yards is essential for the containment and management of your sheep. Sheep require regular management activities such as drenching, vaccination and foot trimming. Inadequate yards can be difficult to use and potentially cause injury to both you and your livestock. Functional sheep yards can be made from a variety of materials and portable panels can be very useful for small flocks.

A shed or area that can be used for shearing and crutching is also useful, particularly if you own non-shedding breeds.

To find out more about how to handle your sheep and other important management aspects to owning sheep download Meat and Livestock Australia's A producer's guide to sheep husbandry practices.

Shearing and crutching

If you have a sheep breed which requires shearing, then you will need to find a shearer to remove the fleeces at least every 12 months. Alternatively, there are breeds such as Dorpers, Wiltshire Horns, Wiltipolls and Aussie Whites which naturally shed their wool each year.

However, first cross or second cross variations of these breeds with wool breeds such as Merinos will still need to be shorn as they will not shed the fleece like a pure-bred sheep.

Sheep must be dry for shearing. You will need to provide cover for your sheep before shearing during wetter periods of the year. If you do not have a shed, perhaps a feed shed or garage.

Crutching is needed between annual shearings, otherwise the long wool around the crutch and tail becomes soiled with dung and urine, attracting blowflies when the skin becomes scalded.

Health and disease

Good, high-level control of parasites and disease is the best long-term strategy for healthy sheep. Along with good health management, pay close attention to biosecurity when buying sheep or moving sheep around different properties. This will minimise the risk of introducing parasites and diseases to your flock and save time and money in the long run.

Ensure you keep animal treatment records and have a plan for when vaccines are due and coordinate with other livestock husbandry activities such as shearing, marking, weaning etc.

Common diseases which sheep owners should be aware of and monitor for are:

- Flystrike
- Internal parasites
- Lice
- Footrot
- Ovine Johne's Disease (OJD)

Internal parasites

Internal parasites or worms are one of the most important health challenges for the Australian sheep industry. Worm resistance is widespread and the challenge is to make effective drenches last as long as possible.

It is important that everyone with sheep has a worm management plan. An effective plan is simple and will save a lot of money, effort and heartache.

The essential elements of a worm management plan include:

- Worm testing. It is cheap and easy to do. Without regular testing, you won't know whether you have a problem, whether your worm management plan is working or whether you have an emerging drench resistance problem on your property.
- Grazing strategy to create safe or low contaminant pastures for weaners and lambing ewes.
- Maintaining good nutrition during periods of poor pasture growth.
- Building worm resistance in the flock.
- Biosecurity measures for new sheep arrivals on the property or any outbreak of worm disease in your flock (a sure sign that your worm management plan has failed).
- Minimising the risk of drench resistance developing on your property.

It is strongly recommended that you routinely do a worm test before you drench your sheep.

Wormboss has a wealth of knowledge on worms, their life cycles and on-farm management practices you can undertake to reduce the effect of worms.

Vaccinations

Vaccines are an effective way to prevent and eliminate animal health issues and avoid preventable diseases. Selecting the right ones for your sheep and making sure you administer them correctly can help to prevent disease and welfare issues in your animals.

Check out this Short Cuts video from the Agriculture Victoria's Red Meat Value Chain team for tips on how to vaccinate with care to prevent carcase damage.

Things to consider include:

- Seek advice from your animal health professional such as a vet or consultant. Use vaccines wisely, do some partial budgets to see which ones will benefit the health of your flock and be the most cost-effective for your production system.
- Consider the range of suppliers and treatment combinations available, seek advice if you are unsure.
- Develop an Animal Health Plan to keep you on track for when vaccines are due and coordinate with other livestock husbandry activities such as shearing, marking, weaning etc.
- Check the labels to ensure you use and store vaccines correctly. Remember to keep records of what you use and when, to maintain your Livestock Production Assurance (LPA) accreditation.

Diseases of sheep that can be managed using vaccines include:

- Clostridial diseases
  - Tetanus
  - Black leg
  - Blacks disease
  - Pulpy kidney
  - Malignant oedema
- Cheesy gland or CLA
- Scabby mouth
- Ovine Johne's disease (OJD)
- Ovine Campylobacteriosis (Vibriosis)
- Erysipelas (Sheep arthritis)

Not all vaccines are the same, different vaccines have different requirements. Incorrect vaccination techniques can harm the sheep. Most vaccines are administered under the skin (subcutaneous) or via a dermal scratch.

You can purchase vaccines and drench from your local vet and some local farm supplies store. Make sure you store your vaccines according to the manufacturer's instructions and maintain good hygiene practices.

If you are unsure or don't feel up to administering drench or vaccines yourself, speak to your local livestock agent or vet for assistance.

Further information

- Visit Agriculture Victoria's Feeding livestock website
- Becoming LPA accredited – The Livestock Production Assurance (LPA) program is the Australian livestock industry's on-farm assurance program covering food safety, animal welfare and biosecurity
- Visit the Agriculture Victoria Health and Welfare website.
- Join a Bestwool/ Bestlamb group.
- Become a Meat and Livestock Australia (MLA) member. MLA membership is free to levy-paying producers of grass or grainfed cattle, sheep and/or goats.

What you cannot feed your cattle, sheep and goats

You must not feed any Restricted Animal Material (RAM) to your ruminants – cattle, sheep and goats.

This restriction also applies to alpacas. Alpacas differ from true ruminants due to the structure of their three-compartment stomachs, nevertheless alpaca owners must still comply with the Ruminant Feed Ban.

What is Restricted Animal Material (RAM)?

RAM is any material that consists of, or contains, matter from an animal (including fish and birds). It also includes eggs, untreated cooking oils, poultry litter and other manures.

Why is the feeding of Restricted Animal Material to ruminants banned?

RAMs pose significant health risks to ruminant animals including risk of exotic diseases that are not present in our Australian herds. Australia is free from bovine spongiform encephalopathy (BSE/'mad cow disease') and other transmittable spongiform encephalopathy (TSEs). The Ruminant Feed Ban was developed and implemented to ensure that if the BSE disease agent were ever introduced to Australia it would not be able to infect Australian livestock.

What are some common foods I should watch out for?

Chicken, dog and cat foods, as examples, can contain RAM and must not be fed to your cattle, sheep, goats or alpacas. It's important that you keep these feeds safely stored away from animals that are always curious to give all sorts of food a try!

Household leftovers or 'kind offers' of surplus food from local businesses should not be fed to goats if there is any risk that the food contains matter from an animal (including fish and birds), eggs, or untreated cooking oils.

Stock feed labelling

Stockfeed products are required to include a statement on their packaging or invoicing whether they do or do not contain RAM. It is important to check labelling before feeding supplements to goats.

"This product contains restricted animal material – DO NOT FEED TO CATTLE, SHEEP, GOATS, DEER OR OTHER RUMINANTS".

For bulk product the labelling may be applied to an invoice. For feed or meal in bags a tag must be attached to the product.

Manufactured stockfeeds that do not contain Restricted Animal Material must be labelled: "This product does not contain Restricted Animal Material".

What are your responsibilities?

- Ruminants should not have access to feeds containing RAM, for example chicken or dog foods. RAM and non-RAM feeds should not be mixed.
- Pastures which have had manures and poultry litter applied must not be accessed or grazed by ruminants, for at least 3 weeks after application.
- Do feed your ruminants and alpacas healthy non-RAM foods that are suitable

Did you know that feeding Restricted Animal Material to ruminants is not allowed? Watch this video to find out more.

Alpacas

Alpacas are extremely cute and full of personality. They are environmentally friendly with padded feet that do less damage to pastures than most other livestock, particularly cattle. If you own a couple or a herd, or are thinking of starting a small herd, here are the basic things you need to know...

Starting your own herd

Before purchasing any alpacas, consider why you want them. In Australia, alpacas are bred for their fleece, as stud animals, for meat, as flock guards to assist protect sheep from foxes, and as pets. Alpacas are herd animals and need the company of other alpacas.

It is recommended that you speak to experienced alpaca breeders/ owners, visit alpaca farms, and are confident handling alpacas prior to purchasing your own herd. You may find an experienced owner who is willing to mentor you as a new owner.

More information about buying your first alpaca is available on the Australian Alpaca Association (AAA) website, buying your first alpaca.

Identification

All properties with one or more alpacas must have a Property Identification Code (PIC).

PICs are used by Agriculture Victoria for tracing and controlling disease and residue problems, for providing information to livestock owners, and during emergency relief and recovery activities. If you already have a PIC for other livestock, you do not need to obtain another one when you purchase alpacas. More information about PICs is available here, Property Identification Code (PIC).

At present, there are no legal requirements for National Livestock Identification System (NLIS) tags in alpacas in Australia, although the AAA is working towards implementing NLIS for alpacas. For more information on NLIS for Alpacas and the NLIS database is available on the Australian Alpaca Association (AAA) website.

Health and husbandry

Alpacas need access to good quality pasture, unlimited, clean water, and shelter from the elements especially in winter and summer. It is important to routinely monitor each alpaca individually and regularly, including condition scoring.

It is important to have good facilities, including a suitable yard or pen to ensure the safe handling of alpacas during health checks, the administration of treatments, and to catch and handle animals during shearing.

Internal parasites (worms), particularly the barber's pole worm, are one of the major causes of death of alpacas in Australia. It is essential to monitor for worms regularly, drench according to results of monitoring, and monitor for drench

How can you manage the introduction of new livestock to protect the rest of your stock? Watch this video to find out more.

resistance in your herd. The WormBoss website provides the principles of worm control for cattle, sheep and goats. Whilst there are some differences between the management of worms in sheep and alpacas, the principles are similar. More specific information about worms in alpacas can be found on the CRIA Genesis website.

In contrast to sheep, that are vaccinated with 5-in-1 type vaccines annually, alpacas require boosters every six months. Alpacas may also require vitamin D during the winter months. The requirement for vitamin D will depend on the location of your property and the stage of production of your alpacas. More information about 5-in1 clostridial vaccination of alpacas can be found on the CRIA Genesis website.

Alpacas should be shorn once a year. Alpacas, particularly aged alpacas, are quite prone to hypothermia after shearing, so it is best to avoid shearing in the colder months or if cold conditions are forecast.

Newly purchased animals should be kept in a designated quarantine paddock until it has been determined they pose no risk of introducing diseases or pests (including weed seeds) to your herd or property.

Unwell animals should be kept in an area that enables close monitoring, veterinary examination (if required), and treatment. An assessment of the risk to other animals will determine if it should be separated from its herd-mates, as this may cause further distress to the unwell animal. Keep in mind that alpacas are very stoic animals and may not show signs of illness until they are very unwell. If unsure, seek advice from your local veterinary practitioner.

Watch the video to learn how Lynda is keeping her alpaca's safe.

Further information

- The Criagenesis website provides an excellent source of information on alpaca husbandy, nutrition and parasites.
- The Australian Veterinary Association Code of Welfare for Alpacas and Llamas also provides useful guidelines.

Biosecurity assurance programs

As an alpaca owner, the best way to protect your alpacas from biosecurity risks is to keep diseases, pests and weeds off your property. Q Alpaca and Alpaca CheQA are quality assurance programs that can help you monitor and manage known diseases and help you reduce the risk of an emergency animal disease.

Further information

- Australian Alpaca Association for access to resources, a broad network of alpaca owners, and the eAlpaca system.
- Alpacas (Animal Health Australia)
- The Criagenesis website provides an excellent source of information on alpaca husbandy, nutrition and parasites.
- Come Clean – Go Clean
- Biosecurity starts on your farm

Honey bees

Are you new to beekeeping or thinking of becoming a beekeeper?

Keeping bees in urban areas requires good husbandry skills — otherwise bees can have a negative impact on those who live close by. It requires significantly more effort and knowledge than simply putting some bees in a box.

Let us help you build a safe home for bees in your backyard and be a responsible beekeeper.

Join a beekeeping club

New beekeepers can learn from experienced beekeepers and gain valuable beekeeping advice, so we highly recommended you join a local beekeeping club or group in your area or find an experienced beekeeper willing to be a mentor while you learn about beekeeping.

The club or group can point you in the right direction of a registered reputable beekeeper, where you can purchase your first disease free bee hive or sign up to be part of their swarm catching program.

They can also provide advice and support on things such as:

- the type of hive you could have
- the best time of year to obtain your hive
- how to get prepared with required personal protection equipment and hive wear
- how to keep records
- new beekeeping technologies
- understanding pests and diseases
- what bee food to plant in your garden
- how to create an appropriate water source for the bees

Some groups also offer access to libraries, where you can borrow relevant beekeeping books, specific for our Australian climate.

For beekeeping clubs and associations please contact the Victorian Apiarist Association (VAA).

Registration

In Victoria, if you own one or more beehives you must register as a beekeeper with Agriculture Victoria. This is a condition under the Livestock Disease Control Act 1994.

Registration online is free if you own 1-5 hives, $30 for 6-50 hives and $0.60 per hive for 51+ hives.

Registration enables the department to conduct disease prevention and control programs to benefit beekeepers. This includes the emailing of helpful information from time to time including legislative amendments and biosecurity alerts and advice.

Apply for registration as a beekeeper using the BeeMAX beekeeper database or call **1800 356 761**.

For further information visit the honey bees page on the Agriculture Victoria website.

Protective clothing

It is essential that adequate protective clothing, including a bee veil, is worn and techniques for safe handling of bees are understood before opening hives.

New beekeepers should read safe beekeeping practices.

Water supply

A strong colony of bees will use over a litre of water on a warm day. Ensure you provide a good water supply for your bees — in a partially shaded position where possible and in close proximity to the hives. Never assume that the colony will satisfy its water requirements without your help.

Pests and diseases

Inspect your hives regularly for anything unusual. There are a number of established pests and diseases of honey bees in Australia that have an impact on the strength and productivity of a colony.

Under the 'Honeybee Biosecurity Code of Practice' beekeepers must regularly inspect their hives for exotic diseases and pests such as Varroa mite, American foulbrood (AFB), European foulbrood, Chalkbrood, Braula fly or Nosema.

If you have any suspicions of these diseases you must notify an apiary officer (contact details below).

You can undertake free biosecurity training at Biosecurity Online Training – Plant Health Australia to recognise the signs of these diseases and to learn about best practices to prevent the risk of these diseases occurring in your hives.

Varroa mite (*Varroa destructor*)

Varroa mite (*Varroa destructor*) is a serious, exotic parasite of adult European honey bees and their brood. It weakens and kills honey bee colonies and can also transmit honeybee viruses. Varroa mite presents a serious risk to a native bee population and to the industry.

Varroa mite (*Varroa destructor*) was reported in sentinel hives at the Port of Newcastle in New South Wales (NSW) on Friday 24 June 2022.

Practice safe beekeeping – PPE for beekeepers

Varroa mite has not been detected in Victoria to date, but the risk of an incursion in Victoria remains high. Everyone has a role to play to ensure we remain free of this pest.

A Control Area Order remains in place for the state of Victoria. A permit is required for anyone bringing bees, hives, queen bees, used beekeeping equipment, pollen for bee feeding, and bee products, including honeycomb, into any part of Victoria from any state or territory.

Victoria continues to support the National Varroa emergency response, and the work being undertaken in NSW. Visit NSW Varroa mite emergency response for more information on the current situation in NSW.

For more information, visit the following Agriculture Victoria's web pages.

- Varroa mite – current situation
- Identifying Varroa mites
- Information and videos on field diagnosis of Varroa

Remember, early reporting of any suspicious signs increases the chance of effective control and eradication.If you are suspicious of an exotic disease or pest such as Varroa mite, please contact the **Exotic Plant Pest Plant Hotline on 1800 084 881 immediately**.

Close up of adult bee with Varroa mite
(Scott Bauer, USDA Agricultural Research Service, Bugwood.org)

Podcasts

Have a listen to the following podcasts from the Urban Plant Health Network series: The Good, The Bad and the Bug-ly.

Episode 8: Keeping your backyard bees healthy with Cynthia Kefaloukos

In this episode Cynthia Kefaloukos, Apiary Pest and Disease Officer with Agriculture Victoria discusses what is actually involved in keeping bees in Victoria, and how Agriculture Victoria is working to protect the apiary industry for both commercial beekeepers and hobby beekeepers.

Episode 15: Are you a honey bee pest warrior? with Ally Driessen

This episode, you will hear from Bee Biosecurity Officer with Agriculture Victoria, Ally Driessen, talking all things honey bees and biosecurity and how beekeepers can become honey bee pest warriors.

Episode 17: The solitary life of native bees with Robert McDougall

This episode explains what some of the more common native bees look like and where they like to live, and how you can encourage them into your garden.

Episode 19: What's all the buzz about bumblebees? with Michael Whitehead

Listen to Invasive species analyst, Michael Whitehead, explain why the large earth bumblebee is not the kind of bee you want to hear buzzing around your garden, and what to do if you suspect you find one.

Legislation

Honeybees need to be cared for and managed — just like other livestock. Once the decision has been made to keep bees, you have a legal and moral obligation to maintain the bees in:

- a healthy state
- such a way that they do not become a nuisance to other people

The bees must be kept in accordance with the:

- Livestock Disease Control Act 1994
- Livestock Disease Control Regulations 2017
- Apiary Code of Practice 2011

For more information visit legal obligations of beekeepers on the Agriculture Victoria website.

Honeybee Industry Biosecurity Code of Practice

There is also an 'Australian Honeybee Industry Biosecurity Code of Practice' that must be implemented in your apiary.

This Code has been developed in consultation with beekeepers to provide a clear framework for beekeepers to engage in best practice biosecurity.

You can find the 'Biosecurity Code of Practice' on the Australian Honey Bee Industry Council website.

Agriculture Victoria Apiary Officers

Apiary officers can be contacted via the customer contact centre on **136 186** or by emailing us.

Further information

- Agriculture Victoria Honey bees web page
- Plant Health Australia Bee Aware
- Australian Honeybee Industry Council (AHBIC) website
- Australian Beekeeping Guide
- extensionAUS – Professional Beekeepers

Horses

Horse owners, trainers and service providers all play a part in preventing the spread of disease.

Having good biosecurity will help protect your horses and keep them and other horses healthy. It will also allow continuation of equestrian activities and help prevent the spread of infectious diseases. This is important as some diseases that infect horses can be passed to people (zoonotic diseases).

Register your property

As a horse owner or keeper, you are required, by law, to have a Property Identification Code (PIC) for the property where your horse is kept.

PICs are an important traceability tool used during disease outbreaks, pest incursions and natural disasters. If there's a flood, fire or disease outbreak we may need to contact you and having a PIC enables us to do that.

The PIC database played a crucial role in communicating with 19,000 registered PIC holders who own horses during the recent investigation into sudden horse deaths on various properties

Watch the video: A simple step for a special friend

What if I agist my horse?

If your horses stay on an agistment property, that property requires a PIC.

Before you arrange agistment for your horses, ask the property owner or service provider if they have a PIC. If yes, they will need to update their PIC information to reflect the number of agisted horses on their property. If not, the horse owner or service provider can apply for a PIC for that parcel of land.

For more information and to access an agistment kit, visit Things you should know about agistment for horses.

Event organisers are responsible for ensuring that properties hosting horse events have a registered PIC and must ensure all horse owners provide PIC details of all horses attending, to enable tracing of horse movements between PICs.

Maintain your PIC

It's important to keep your PIC data updated if you:

- Sell your property and/or relocate your horses
- Change phone number or email address
- Make changes to other livestock on your property

Review and update your PIC information on the Agriculture Victoria PIC Portal.

Watch the video: Protect your property with a Property Identification Code

Further information

- Print and display the simple step for a special friend poster at your riding club.
- Visit the Register your property webpage of the Agriculture Victoria website.

Have a biosecurity plan

A farm or property biosecurity plan helps structure your approach to preventing the introduction and spread of pests, disease, weeds and contaminants to and from the property where your houses are housed.

The Horse Venue Biosecurity Workbook on the Farm Biosecurity website contains a number of useful tools, including a self-assessment worksheet with many tips to help develop a farm or property biosecurity plan.

Identify your risks

Biosecurity is about managing risks. Each property is different and faces different challenges, so it is critical to assess the biosecurity risks that are most likely to impact your property. Common risk pathways include:

- Introduction of livestock – consider any new horse or one returning from a show or event as a potential disease risk. Ideally new, returning or visiting horses should be quarantined separately from your other horses for at least 10 days. Monitor horses daily for signs of ill health and injury, and to ensure they are eating and drinking.
- Introduction of bedding and feed supplies – feed and bedding should be checked for contaminants, and accompanied by a Commodity Vendor Declaration, where possible.
- Access points – Promote your biosecurity and hygiene practices through signage at access points. Have facilities and equipment in place for washing and disinfecting shoes and clothing and any other equipment and vehicles that enter your property.
- Boundaries – Keep boundary fences in good condition. Barriers such as double fencing and tree plantations increase perimeter security
- Visitors – properties with horses can have a lot of vehicle movements, horses coming and going to and from various events and venues, which can increase risk of disease introduction and spread. Consider having a designated parking areas for visitors and contractors and ensure everyone arrives with clean footwear and clothing.
- Identify and manage pest animals, which can spread disease. An integrated pest management program should be in place to deter pests. Good drainage and manure management will help prevent insects like mosquitoes and March flies from breeding. Control rodents and keep food in rodent-proof containers. Avoid locating horse operations in swampy areas, near bat colonies or intensive piggeries as these may be carriers of some viral infections that affect horses.
- Equipment – ensure tack and equipment are kept clean and disinfected between use on different horses.

Training

Train yourself, your employees, visitors and agisters in disease prevention, identification and control procedures.

Record Keeping

Keep records of movements of horses and semen, visitors and feed, bedding, delivery records and animal health treatments so contacts can be traced in the event of a disease outbreak.

Emergency Animal Disease (EAD) Action Plan

As part of your farm biosecurity plan, it is recommended to detail actions and responsibilities that are necessary in the event of a suspicion and/or occurrence of emergency animal disease outbreak. Many emergency animal diseases are notifiable, to ensure that relevant authorities know where in the community significant diseases are occurring.

Notifiable diseases

There are various contagious or infectious diseases and conditions which may affect horses that are declared as notifiable diseases for the purpose of the *Livestock Disease Control Act 1994*. A notifiable disease is one that must be reported within a defined timeframe to agricultural authorities.

Examples of notifiable diseases that can affect horses are included below.

Equine influenza

Equine influenza is a highly contagious virus that can be spread horse to horse or by humans on their skin, clothes and riding equipment.

Hendra virus

Hendra virus can be passed to horses from flying foxes. It can cause severe illness, usually resulting in death. On rare occasions, close contact with infected horses has also caused illness and death in humans.

Hendra has only occurred in horses in QLD and NSW to date, but all areas in Australia where flying foxes and horses co-exist are considered to be at risk. It is recommended to take steps to protect and vaccinate your horses against Hendra virus.

African horse sickness

African horse sickness (AHS) is the most serious known viral disease of horses, resulting in up to 80-90 percent mortality in affected horses. It is an exotic disease which has never been reported in Australia.

Arboviral disease in horses

Arboviral diseases are diseases spread by biting insects and may affect many different species, including horses, water birds and on rare occasions, humans. Arboviral diseases associated with Japanese encephalitis (JE) virus, Murray Valley encephalitis (MVE) virus, West Nile virus (Kunjin strain) and Ross River virus are known to occur in Victoria.

For more information about specific diseases and reporting timeframes, see Notifiable diseases of horses.

Subsidies may be available from Agriculture Victoria for arboviral disease investigations. See SDI Program for more information.

In the event of an emergency...

Key contacts

- Visit the VicEmergency website, or download the app, the official Victorian Government app for emergency warnings and information. Set up a user profile and watch zones to receive official warnings and information for areas that interest you or call 1800 226 226.
- If you suspect an emergency animal disease, call your District Veterinarian or Animal Health Officer by contacting us on 136 186 or to the Emergency Animal Disease Hotline 1800 675 888.

It is important to plan and be prepared, to ensure the welfare of your horses and livestock during emergency events, such as bushfires or floods.

Prepare an emergency plan, an emergency kit, pick a safe location and consider animal transport.

Prepare for animals that will be evacuated and those who will remain on the property. Keep livestock including horses contained within the property boundaries for the safety of the horses, the community and emergency services. For the latter, consider preparing a low-risk area in case of bushfire.

Further information

For further information visit the following pages on the Agriculture Victoria website:

- Horses and bushfire
- Assessing horses after bushfires
- Water for horses following fires
- Horses and floods
- Download a checklist, Horses and livestock in emergencies.

Refer to the Country Fire Authority for guidance on developing a bushfire survival plan for horse.

Pigs

Whether you are keeping pigs to bring home the bacon, as a commercial enterprise or even as pets, you play a vital role in protecting the Australian pork industry and animal welfare.

As a pig owner there are a few must dos for you to meet your biosecurity and welfare responsibilities.

Let's cover these off...

Feeding pigs

What you cannot feed your pigs

To ensure the health of your pigs it is best for them to have a balanced diet and there are specific commercial feeds available that are designed to meet their nutritional needs.

What is prohibited pig feed?

Prohibited pig feed (formerly known as swill) is food scraps or food waste that contains meat, or which has been in contact with, meat or meat products.

Why is feeding pigs prohibited pig feed banned?

- The feeding of prohibited pig feed to pigs is banned in Australia.
- The feeding of prohibited pig feed has caused outbreaks of serious animal diseases overseas.
- The risk is from infectious disease, particularly exotic viral diseases such as foot-and-mouth disease, African Swine Fever (ASF) and classical swine fever.
- These diseases can be introduced through feeding pigs infected or contaminated meat or meat products which may be imported from a country where the diseases are present.
- It is not acceptable to assume that meat or meat products in the food waste that you have is safe in this respect.
- The viruses of concern are often not destroyed by chilling, freezing, cooking or curing.

Foods that are banned

Meat, meat products and any food that is served on the same plate or that has come into contact with meat is prohibited feed and must not be fed or supplied for feeding to pigs.

Dairy products from overseas are also banned, unless legally imported for the purpose of feeding livestock.

Food that cannot be fed to pigs include:

- salad and vegetables that has been served with meat
- butcher's shop waste
- pies, pasties, deli foods — including bacon, cheese (from overseas) and salads that contain meat.

If in doubt, do not feed leftover food to your pigs.

Read more about prohibited pig feed.

What you can feed your pigs

Pigs can be fed:

- commercially prepared pig rations
- grain
- fruit and vegetable waste from markets
- bread that does not contain any meat material (for example bacon or ham)
- milk
- milk product or by-products that originate from a factory or milk processing premises (licensed under the *Dairy Act 2000*).

If in doubt, do not feed leftover food to your pigs.

Read more about pig health and welfare.

Do you know what you can and can't feed pigs? Watch this video to learn about prohibited pig feed.

Why is biosecurity important for pig owners?

The biggest threat to the health and welfare of all pigs and the Australian pork industry's sustainability is an outbreak of an Emergency Animal Disease (EAD). An EAD outbreak can have a devastating effect on pig production and pigs kept at hobbies farms, schools, sanctuaries and those kept as pets.

Exotic diseases that may start with an infection in a pig herd can potentially pose a risk to other animals and people. Foot-and-mouth disease is an example as it can quickly spread between different cloven hoofed animal populations.

Exotic diseases will also economically impact the agriculture sector including lowering the market value of the pigs and impacting on international trade.

These diseases are not currently in Australia and include African Swine Fever (ASF) and foot-and-mouth disease (FMD). ASF and FMD continue to spread globally causing significant impacts on the health and welfare of animals, mental health and wellbeing of people, profitability of businesses, food supply, and the employment of people throughout the supply chain including producers, veterinarians, nutritionists, feed supply businesses and transporters.

Although strict border biosecurity protocols help to keep Australia's pigs safe from many diseases, farm-level biosecurity is one of the most important lines of defence.

How can I protect my pigs?

Everyone who owns, cares for, or works with a pig or pigs should understand biosecurity, the risks, and how they can implement practices to protect the health and wellbeing of their pigs.

Following some simple biosecurity practices can help keep your pigs happy, healthy and disease free while also assisting you to be prepared for an EAD incursion like ASF and FMD.

Safeguarding the genetics

This short video shows how Nat and Jono practice good biosecurity on their regenerative farm in Blampied. They have British White cattle, Berkshire pigs and Finn sheep on 148 acres of rich volcanic soils.

Watch the video to learn how Nat is keeping her pigs safe.

Remember to review and update your biosecurity plan annually. Biosecurity is about managing risks. Each property is different and faces different challenges, so it is critical to assess the biosecurity risks that are most likely to impact your property.

A farm biosecurity plan is a practical way of showing how you are preventing the introduction of pests, disease, weeds and contaminants to your property, spreading around your property, or spreading from your property.

Remember to review and update your biosecurity plan annually. Biosecurity is about managing risks. Each property is different and faces different challenges, so it is critical to assess the biosecurity risks that are most likely to impact your property.

A farm biosecurity plan is a practical way of showing how you are preventing the introduction of pests, disease, weeds and contaminants to your property, spreading around your property, or spreading from your property.

A farm biosecurity plan should:

- Define your responsibilities;
- Outline the disease protocols used on your property;
- Ensure property information and biosecurity measures are quickly accessible; and
- Enable you to easily communicate your biosecurity procedures to others.

There are no right or wrong answers when developing a farm biosecurity plan – the only bad biosecurity plan is the one you don't have

A biosecurity plan toolkit has been developed to guide pig producers in preparing robust biosecurity plans. The tools are designed to suit all levels of pig owners from pet pigs to farm stays, hobby farms and own consumption and all commercial producers.

For commercial producers this plan will also meet the requirements of the updated standards under APIQ®, the premier quality assurance program for pig producers in Australia. APIQ® covers 90 percent of Australia's pork production and provides customers with assurance that high on-farm management, food safety, animal welfare, biosecurity, and traceability standards are in place.

Free worm testing program

Along with helping to develop a biosecurity plan, Agriculture Victoria staff are offering free parasite testing of pig herds for all pig owners, regardless of how many you have. The property visits and sampling are undertaken voluntarily.

Without management, worms can cause illness and weight loss in pigs. Pigs are usually infected through other pigs or pig faeces such as off a dirty truck or livestock transport. Dirty equipment, such as feeders from other pig properties, can also be a source of infection.

The testing across the state will help Agriculture Victoria gather data about the extent of worms in Victoria's pig herds.

What happens at the visit?

A member of our animal health and welfare team will be in touch to arrange a convenient time to visit. The visit will include taking pig faecal samples for worm testing and taking you through the Pig Biosecurity Plan Template. The visit may take a couple of hours. The templates are available on the Animal Health Australia's Farm Biosecurity website.

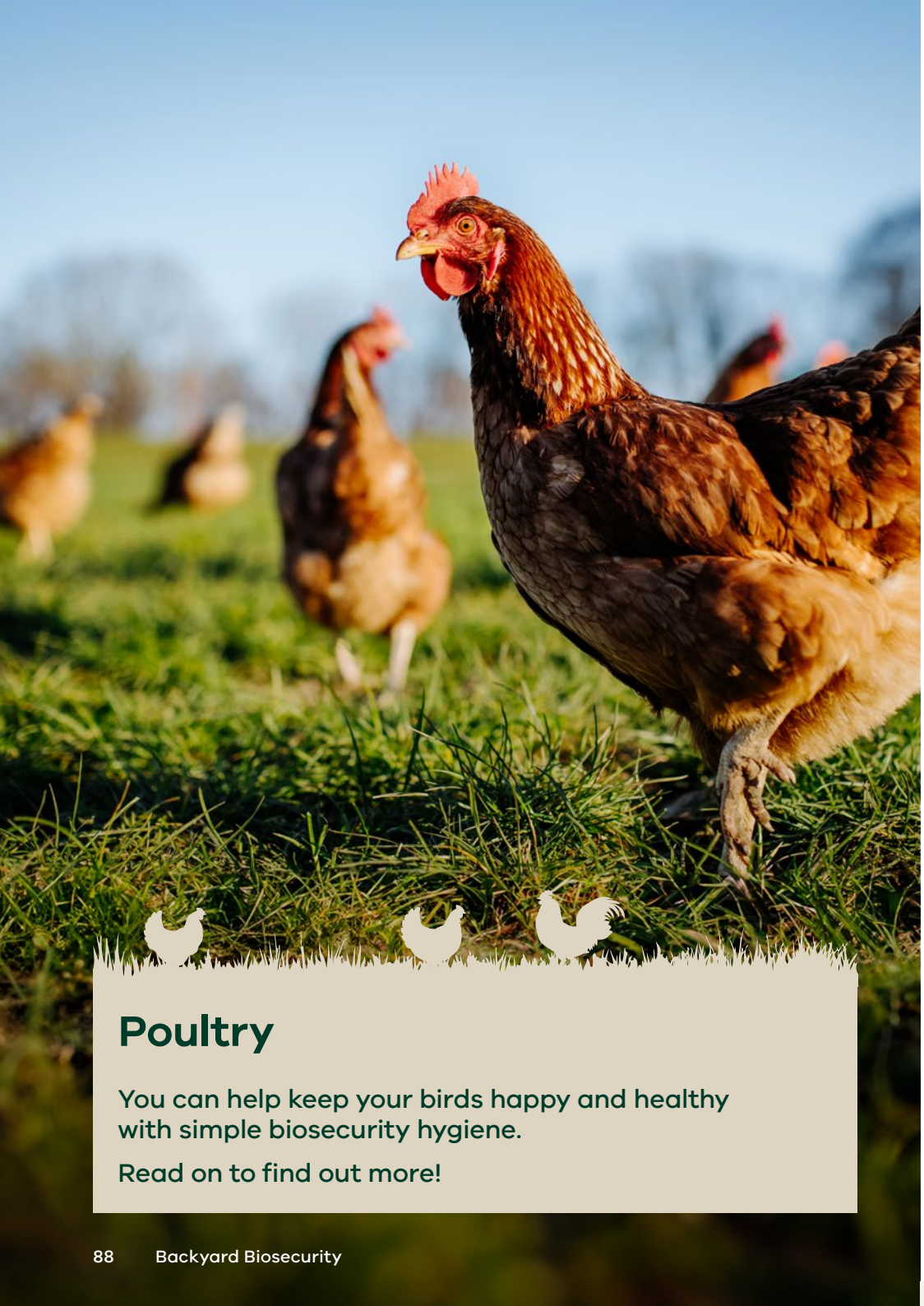
The samples will be sent to a laboratory for testing. You will then be provided with the results and some information about how to manage worms.

To obtain help with developing a biosecurity plan and take part in the free parasite testing contact Di Phillips.

This project has been co-funded by the Swine Compensation fund until June 2024.

Further information

- Training and development for pig owners (Australian Pork Limited)
- African Swine Fever fact sheet (Agriculture Victoria)



Poultry

You can help keep your birds happy and healthy with simple biosecurity hygiene.

Read on to find out more!

Selling and sharing backyard eggs

If you are thinking about selling or giving away eggs, regardless of the size of your flock, check your legal obligations and assess the potential food safety risks against the egg standard.

As a poultry owner, you must comply with certain laws, standards and codes of practice. All egg producers must comply with Standard 4.2.5 — Primary Production and Processing Standard for Eggs and Egg Products by Food Standards Australia New Zealand (FSANZ).

If you have than 50 egg-producing birds and sell or share your eggs, it is highly recommended that you obtain an egg stamp to enable better traceability in case of a food safety risk.

In Victoria, if you keep 50 or more poultry for any purpose, you must get a Property Identification Code (PIC) from Agriculture Victoria. A PIC is used to register and provide producers and backyard poultry owners with their egg stamp code. A PIC enables Agriculture Victoria to contact and assist you in the event of a fire, flood, or animal disease outbreak, such as avian influenza or Salmonella of human health concern like Salmonella enteritidis. PICs and egg stamp codes are free and easy to obtain through Agriculture Victoria.

- Applying for a Poultry PIC and egg stamp code

If you are selling or giving away eggs, use new cartons if possible. Be aware that there are legal restrictions to using corporate-branded cartons without permission.

For more information see:

- Producing safe eggs at home
- Complying with the egg production standard
- Egg safety awareness

Poultry health, diseases and prevention

Maintaining good biosecurity practices will help to protect your birds, your family's health, and Victoria's agriculture industry. There are legal requirements under the Victorian domestic animals and animal welfare legislation that backyard poultry owners need to follow.

The most important welfare issues are:

- Providing a proper and sufficient diet and ready access to water.
- Providing a spacious, weatherproof coop, so the birds can roost away from weather extremes.
- If predators such as foxes or feral cats are a risk in your area, providing a vermin-proof run for the birds.
- Isolating any sick bird/s from the others and seeking veterinary advice in a timely manner.

For more information see:

- Poultry health, diseases and prevention

Know what to look for

While outbreaks of avian influenza, Newcastle disease, Salmonella Enteritidis and other bird-related diseases are uncommon in Victoria, it is important to be aware of their signs. Early detection and reporting may help to prevent a large-scale outbreak.

Signs of a sick bird include:

- ruffled feathers
- unusual head or neck posture
- inability to walk or stand
- loss of appetite and reluctance to drink
- droopy appearance
- swollen head, wattles, or comb
- sharp drop in egg production
- breathing difficulties
- diarrhoea
- sudden death.

For more detailed information regarding specific poultry diseases visit:

- Avian influenza FAQs for backyard poultry owners
- Newcastle-disease
- Salmonella-enteritidis

What do I do if I suspect my birds are unwell?

When your chickens are unwell, contact your local vet. When there are unexplained large or unusual numbers of dead or sick birds or very sharp drops in egg production, report with urgency to the 24-hour Emergency Animal Disease Hotline on 1800 675 888, or to the local Agriculture Victoria Animal Health Officer.

Wildlife

One of the special things about living on a small farm or acreage is the connection with our native wildlife. Being able to step outside to experience birds, frogs, lizards and a diverse range of other animals can be very rewarding. So let's unpack what you can do to protect, support and live with our native wildlife, and protect yourself as well...

Supporting wildlife on your farm

Wildlife is an integral part of our ecosystems. Not only do native animals help to keep our environment healthy, but they can also help out on your farm! From bees and other insects pollinating crops and veggie gardens to kookaburras and reptiles catching mice, ibis eating crickets, microbats preying on flying insects or songbirds snapping up caterpillars, wildlife do their bit to help your farm and garden flourish.

But wildlife needs your help too. Here are some ways you can support wildlife on your property, by looking after their habitat and ensuring they stay wild and healthy:

Habitat

One of the best ways to protect wildlife is to protect their habitat – the places that provide shelter, food and water:

- Protect remnant habitat on your farm, including rocks, dead trees and fallen logs – valuable homes to wildlife, including bats, lizards and small mammals. Try to avoid disturbance to rocks, logs and woody debris – the spaces underneath provide shelters that protect animals from extremes outside.
- Create new habitat by planting native species local to your area, including grasses, shrubs and trees. These not only look good but provide shelter and healthy foods for a range of native wildlife. Nest boxes can also be installed to create homes for hollow-dependent species.
- Bird baths or other water sources are a great way to see and support wildlife in your garden. Put them at different heights to suit a variety of animals.

Keep Wildlife Wild

Seeing a native animal in the wild is something special. Don't forget that wild animals can be unpredictable and it's important to keep your distance, for your safety and theirs:

- Avoid disturbing wildlife – approaching too closely can cause stress to animals and disrupt resting, mating, feeding or caring for young.
- If exposed to people too often, wildlife can lose their natural caution, which is essential to their survival in the wild.
- Cats and dogs make great companions, but owners need to be aware their pets are also very efficient predators, killing and injuring many native animals every year. Always keep dogs on a lead around wild animals. Owners can face penalties if their pet chases, attacks or kills wildlife.
- Sometimes wildlife may defend themselves and cause injury to you or your pets. Give them plenty of space, especially if they are fighting, courting or have young nearby. This includes snakes, which won't actively try to hurt you but can be defensive if startled. If you encounter a snake, don't panic, calmly move away, and maintain a safe distance while it moves on. Never try to pat or handle wild animals.
- Some wildlife also carry diseases that can be transferred to people. If you find sick or injured wildlife, call a wildlife rescuer (see below for more information).

Let Wildlife Feed Themselves

Please don't feed wildlife: their lives depend on it. While you may be trying to help, feeding can have unintended consequences:

- Wild animals rarely, if ever, need to be fed by people. Human food may not be suitable for wildlife or their young.
- Regular feeding can lead to large numbers of wild animals gathering and impacting habitat and homes. Congregating closer to homes can put wildlife at greater risk of harm from dogs, cats, foxes and vehicle collisions on roads. It can also lead to spreading of diseases.
- Animals may become dependent on being fed by people and no longer be able to look after themselves. They may approach people looking for food, which can lead to injury.

Wildlife disease

Wildlife can be affected by a range of diseases. Some diseases are widely present across Victoria, while others require notification to DEECA or intervention to prevent further spread.

Find out more below about some common wildlife diseases, and what to do if you see something unusual.

Psittacine beak and feather disease

Beak and feather disease is a highly contagious viral disease that can affect all members of the Cockatoo and Parrot families. It weakens the birds and makes them susceptible to other infections. Signs of beak and feather disease include feather loss, baldness, inability to fly, and an overgrown beak.

How you can help

Don't feed birds in your garden, as disease can spread between them when they gather to feed. If you find sick birds, it is important to get them to a vet or wildlife shelter (see below for more information).

Wombat mange

Wombat mange, also known as sarcoptic mange, is a skin infection caused by parasitic mites. These mites burrow under the skin to lay eggs – when they hatch they cause intense itching and discomfort. Mange symptoms start with fur loss before thick scabs and ridges develop that eventually crack and become open wounds. At later stages, mange can affect wombats' eyes, causing blindness. Untreated, mange in wombats will lead to a slow and painful death.

How you can help

Mange Management Inc. is a not-for-profit organisation that specialises in treating mange in wombats. They can provide free treatment kits, advice on treatment options and can even connect you with trained volunteers to help treat wombats on your property.

For further information on mange and how to treat it, contact Mange Management Inc. or on 0431 600 125, or visit their website.

Chronic phalaris toxicity and kangaroos

The green flush of young phalaris grasses can be a welcome sight after a dry spell. But not for kangaroos. Young phalaris contains toxins that can cause a brain condition called chronic phalaris toxicity or 'staggers' in livestock and kangaroos. Staggers impairs movement. If kangaroos are unsteady, hopping in an exaggerated way, uncoordinated or falling over, they may have staggers.

How you can help

It's difficult to prevent or treat staggers in wild kangaroos. Animals with mild symptoms may recover. Kangaroos with severely affected movement are more vulnerable to injury and predation. They can also be hit by cars or become trapped in fences. If you are worried about the health of kangaroos on your property, please contact a local wildlife rescuer (see below for more information) for assessment and possible veterinary attention. You can also report cases to DEECA's Customer Contact Centre on 136 186.

Avian botulism

Waterbirds can sometimes die in large numbers. A common cause is botulism, caused by a toxin produced by the naturally occurring bacteria Clostridium botulinum. Avian botulism paralyses affected animals. Waterbirds might not be able to walk, swim or fly, and as the illness gets worse, birds can no longer hold their necks up. Eventually birds can't breathe or they drown. Outbreaks happen when conditions are right for the bacteria – warm water, low oxygen and lots of decaying matter for the bacteria to feed on. Avian botulism spreads when animals consume infected maggots, or birds or fish that have died from the toxin.

How you can help

Botulism is not the only cause of mass bird deaths. Other diseases, contamination or suspicious activity can be involved. Please report dead birds on your property to DEECA's all-hours Emergency Animal Disease Hotline on 1800 675 888 so that animal disease can be ruled out. Reporting bird death events to DEECA is important so the cause can be identified and managed to minimise further harm to you, your animals and your local wildlife.

Reporting serious wildlife illness

Some serious and exotic diseases of wildlife and livestock can have significant environmental, social and economic impacts. If landowners and vets suspect that an animal is infected with one of these 'notifiable diseases', they must notify Agriculture Victoria within a certain timeframe. Signs you could be witnessing in wildlife include:

- High rate of death or sickness in animals
- Unusual nervous signs such as tremors, uncharacteristic aggression or paralysis, including in bats
- Multiple species are impacted.

To notify the authorities of a suspected notifiable disease, call DEECA's all-hours Emergency Animal Disease Hotline on 1800 675 888. For more information on notifiable diseases visit the Agriculture Victoria website.

Managing wildlife issues

Wildlife can sometimes cause issues to property, farmland, the environment, or people, and the *Wildlife Act 1975* recognises legal management options.

If wildlife is negatively impacting crops, pasture, infrastructure, human safety or biodiversity values, landowners can contact DEECA on 136 186 to get advice on ways to manage wildlife impacts. You can also apply to the Conservation Regulator for an Authority to Control Wildlife (ATCW) permit. Visit ATCWs for more information.

Wildlife crime

In Victoria, all wildlife is protected by law, and it is illegal to harm, kill, scare, disturb or take native animals without authorisation.

The Conservation Regulator is responsible for investigating and prosecuting crimes involving native wildlife under the *Wildlife Act 1975* and the Prevention of Cruelty to Animals Act 1986.

If you find sick, injured or dead wildlife and suspect a wildlife crime has occurred, or believe a person has removed wildlife without authorisation to do so, you can report it to Crime Stoppers Victoria on 1800 333 000. Callers can remain anonymous.

Assisting sick or injured wildlife

Finding sick or injured wildlife can be a challenging experience. Here are some tips to get the wildlife assessed and the care it needs as soon as possible.

- Firstly, contact a local rescuer, foster carer or shelter for assistance. To find a rescuer near you, call Wildlife Victoria's 24-7 hotline on 8400 7300, or use DEECA's Help for Injured Wildlife online tool.
- While anyone can transport sick or injured wildlife, wildlife rescuers are experienced and trained to help. Sick or injured wildlife from the wild must only be taken to a veterinarian, a wildlife shelter or foster carer, to be assessed and/or rehabilitated.
- Don't approach or move the wildlife as it is likely to be stressed and it could injure you or be further injured. Remember the animal is wild and may feel stressed or threatened by your presence – stay calm, speak softly, move slowly and keep any pets away to avoid stress to the animal.
- It is illegal to take or keep wildlife from the wild as pets and you cannot take the animal home with you. Taking wildlife from the wild without permission is an offence under the Wildlife Act 1975.
- Remember, never handle bats as they can carry serious diseases. If you find a sick or injured microbat or flying-fox, do not touch it – call a trained and vaccinated rescuer instead.

Further information

Want to know more about supporting healthy wildlife on your farm? These resources can help:

- DEECA Wildlife page
- DEECA Help for Injured Wildlife Online Tool
- Wildlife Gardening
- Birdlife Australia How to make your garden bird-friendly
- Wildlife Health Australia

Thank you!

Thank you for joining us on our journey through the biosecurity fundamentals of managing small-scale landholding.

We hope you've picked up some useful tips and must-knows to implement good biosecurity practices on your land and to minimise the risk of pests and diseases.

Click here to access previous editions of the Backyard Biosecurity newsletter series.

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