



Livestock-Liaison Industry (LLI)

Guide for the egg industry

JANUARY 2022 edition



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Introduction

Congratulations on your appointment as the Liaison - Livestock Industry (LLI) for the egg industry. Your help, expertise and commitment are greatly appreciated.

Depending on the circumstances of the incident, Egg Farmers of Australia will liaise with Australia Eggs in relation to the rotation of LLIs for long incidences. It is appreciated that many LLI's have indicated that they are able to do a number of week-long rotations.

It is hoped that this guide will provide some initial information in the first days of a response incident to assist as you become a part of the State Control Centre (SCC) or Local Control Centre (LCC).

All trained LLI's for the egg industry will receive an electronic copy of this guide. This guide is a quick guide to use in conjunction with the detailed information provided through AHA's LLI's training. It is an industry guide.

Egg Farmers of Australia (EFA) will continue to update and improve this booklet on an annual basis based on new information of feedback from LLI's.

This booklet was produced during the Victorian AI response of 2020-2021. Information in relation to other diseases have been included for your reference.

Current List of LLI's for the egg industry (by state)

Queensland

Melinda Hashimoto
John Coward
Kylie Jackson
Lachlan Ironside
Victor Alvarez

Victoria

Brian Ahmed
Meg Parkinson
Ryan Peacock

New South Wales

Nil

Western Australia

Brendan Bell
Ian Claxon

Tasmania

Nil

South Australia

Laura Fell
Darren Letton
Jessica Spencer

ACT

Nil

Checklist

✔	Checklist item	Answer/Notes
	Have you received a logbook template?	
	Have you made contact with each of the impacted egg farmers?	
	Do you have a copy of the farm map?	
	What time are the daily conference calls/meetings or debrief calls/meetings, add these to your diary.	
	Make a meeting time for an LLI meeting with the incident controller and head of operations	
	When will the industry meetings with farmers be held?	
	How does the Department/CVO office link in with industry for decisions in relation to; <ul style="list-style-type: none"> • Each farm; (who is the case manager) • EADRA plan and; • Surveillance plan? 	

GAANT charts are utilised by the department to monitor progress of outbreak response. An example is set out below:

Progress of the Infected Premises - DDD Activities														
	Depop	Disposal	Cleaning and Disinfection							Shed End Date (Official)	Expected End Date C&D	C&D Checklist Complete	Milestone Payment	Comments
			Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7					
	5-Aug-20	20-Aug-20												
	5-Aug-20	20-Aug-20										5-Oct-20		
	NA	NA												
	NA	NA												
	NA	NA												
	NA	NA												
	NA	NA												

LLI information

The following link provided from the Animal Health Australia website is useful to provide to Government officials who may not be familiar with the role of the LLI.

<https://animalhealthaustralia.com.au/download/8966/>

AUSVET plan link

<https://www.animalhealthaustralia.com.au/our-publications/ausvetplan-manuals-and-documents/>

Emergency Animal Disease Response Agreement (EADRA) link

<https://www.animalhealthaustralia.com.au/what-we-do/emergency-animal-disease/ead-response-agreement/>

Nationally Agreed Standard Operating Procedures (NASOP)

<https://animalhealthaustralia.com.au/nationally-agreed-standard-operating-procedures/>

Avian Influenza checklist for farmers

The following checklist created by Egg Farmers of Australia and Australian Eggs was made to assist farmers to understand the steps involved should their farm be impacted. The checklist was prepared specifically for Victoria and therefore difference in state regulations may see a slight difference in steps.

<https://www.australianeggs.org.au/dmsdocument/1157-avian-influenza-checklist-pdf>

Linking in with the CEO of EFA

The Egg Farmers of Australia team provides information to members. The CEO discusses the funding required in the response pertaining to EADRA with the EFA board, and information is then provided to Australian Eggs Managing Director who attends the Consultative Committee on Emergency Animal Disease (CCEAD) and National Management Group (NMG).

It is crucial as the LLI that you are providing information through to the CEO. This means that you are in regular contact with the CEO and that you are following up with the public information unit in relation to information that may be provided to the Department as a courtesy before being emailed out.

EFA Directors and Staff

The EFA CEO and Administration and Engagement Officers details are listed below.



Melinda Hashimoto
CEO
0434 999 600
ceo@eggfarmersaustralia.org



Kylie Jackson
Administration & Engagement Officer
0413 750 585
info@eggfarmersaustralia.org

The EFA Directors are listed below for each state.

NSW



Bede Burke AM
Chairman
0427 606 270
bedeburke@bigpond.com



NSW Farmers

QLD



John Coward
Deputy Chair & Secretary
0407 622 166
john.coward1@gmail.com



CEO
Qld United Egg Producers

SA/TAS



Ruth Drinkwater
Director
0409 759 322
ruthmcq@mrsclucks.com



Chair
Commercial Egg Farmers Association
of SA & TAS

WA



Ian Wilson
Director
0409 081 705
dualcidium@westnet.com.au



Chair
Commercial Egg Producers
Association of WA

VIC



Brian Ahmed
Director
(03) 9742 1526
brian@ltseggs.com.au



Egg Group Chair
Vic Farmers Federation

Poultry and related Industry representative bodies

Name	Organisation	Poultry type	Position	Phone	Email
Vivien Kite	Australian Chicken Meat Federation (ACMF)	Chicken Meat	Deputy Director	(02) 9929 4077	vivien.kite@chicken.org.au
John Houston	Australian Duck Meat Association	Duck	Chairman	0417 465 260	
Greg Parkinson	Australian Duck Meat Association	Duck	CEO	0417 506 574	g.parkinson@inet.net.au
Col Quast	Australasian Turkey Federation	Turkey Meat	Vice President	0428 667 719	colin@Quastturkeys.com.au
Jodie Redcliffe	Australian Chicken Growers Association			0408 758 602	
Chris Gregory	Emu Industry Federation of Australia	Emu	President	0418 814 211	chris@emutracks.com

Valuation

Damien Kelly

Specialised Breeders Australia

0459 893 518

(*Note, if the impacted farm is a client of SBA, due to conflict of interest, they are unable to undertake a valuation)

David May	Consultant	0436 813 076
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Greg Underwood	(c/- Bioproperties)	03 9871 2000
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Contractors

Please see below list of contractors per State who provide cleaning and disinfecting services.

The link below will take you to the list of approved chemicals which can be used.

<http://permits.apvma.gov.au/PER89609.PDF>

New South Wales

Business Name: Waterblast Technologies
Contact Name: Dave Howard
Phone Number: 0477 456767
Services: Shed Washdown & sanitise
Area/Location: Tamworth

Business Name: Advance Spray
Phone Number: 02 4941 2000

Business Name: Advanced Pest Control
Contact Name: Michael Henshaw, Hanna in Office.
Phone Number: 02 4941 2000
Services: Sanitising/spraying Sheds, supply chemicals for water sanitising
Area/Location: Hunter, Central Coast, maybe others

Business Name: Prowash Poultry
Contact Name: Rod Grant
Phone Number: 0429 886 866
Services: Washing sheds, sanitising sheds, black beetle spraying
Area/Location: Hunter, Central Coast

NSW Department of Primary Industries, Biosecurity and Food Safety have advised they have a comprehensive list of contractors on hand should an outbreak occur.

Queensland

Information to be developed.

South Australia/Tasmania

Information to be developed.

Victoria

Business Name: Fox Farm services
Contact Name: Gareth
Phone Number: 0439 308 199
Services: Washdown and sanitation

Contact Name: Brad McAuliffe, Business and Development Manager
Phone Number: 0417 219 204
Services: Washdown and sanitation

Business Name: B & A Pressure Cleaning
Phone Number: 0400 317 533
Services: Washdown and sanitation

Business Name: Tyson Pressure Cleaning
Phone Number: 0405 497 123 or 0405 497 124
Services: Washdown and sanitation

Business Name: AusWash High Pressure Cleaning
Contact Name: Craig Dawson
Phone Number: 0418 131 683
Services: Washdown and sanitation

Business Name: A1 Pressure Wash
Phone Number: 0452 416 629 or 0478 513 858
Services: Washdown and sanitation

Business Name: Provac
Contact Name: Adam
Phone Number: 1300 725 616 or 0427 015 981
Email: adam_provac@bigpond.com
Services: Washdown and sanitation

Business Name: Able Environmental Services
Phone Number: 0428 361 163
Services: Sanitation Only

Business Name: Ability Pest Control
Phone Number: 0419 333 835
Services: Sanitation Only

Additional contractors used in Agriculture Victoria AI Response 2020 – 2021

Company name	Service provided	Contact details
ASAEL Pty Ltd	Collection of emu blood samples and training of departmental staff	Doug Black 0408 571 100 doug@microchips.com.au
B&R Poultry Services	Depopulation, removal and disposal of birds, specialised cleaning and	Brad McAuliffe 0417219204 brad@brpoultry.com.au

	decontamination of poultry sheds.	http://brpoultry.com.au/
Bannockburn Earth Worx	Removal of chickens and litter from the floor of sheds	Tom McBride 0435 892 471 tommcbride10@hotmail.com
Begbie's Earthmoving	Remove dead birds and litter from sheds, construct burial pits and other earthworks.	Robert Begbie 0419 513 224 rjbegbie@bigpond.com
Environmental Package Pty Ltd	Valuation of poultry, poultry products, feed, by-products (litter, manure) and sundry equipment.	David May 0436813076 Dmay4152@bigpond.com
Hayona	Removal of dead birds and litter, replacing clay and spreading of gravel.	Hadyn McDonald hayona@bigpond.net.au 0427706662
Scolexia Pty Ltd	Supply of professional advice to determine the scope of works required to complete the cleaning and disinfection of infected premises. Supply of professional advice to verify the completion of scoped cleaning and disinfection works. General technical and biosecurity advice.	Peter Scott 0408386724 pscott@scolexia.com.au www.scolexia.com.au
The Spreaders	Supply, delivery and application of hydrated lime.	Noel Squires 0419 891 886 nsquiers@bigpond.com
Whelans Group Investments Pty Ltd	Pickup and transport of birds, manure and feed from infected property to landfill site.	Tim Whelan 03 5152 2844 timwhelan@whelansgroup.com.au https://www.whelansgroup.com.au/
JTA Health	Asbestos site assessments and report; labelling of asbestos	Tom Trotman 0419 920 127/ 1300856282 tomt@jta.com.au https://jta.com.au/

Please NOTE this list current at time of response during July 2020 – Feb 2021

Western Australia

Information to be developed

Logbook template to be provided by DPI

Please ensure that a downloadable template is provided by the DPI if you are working remotely. If you are in the control centre, you will be provided with a hardcopy logbook.

EADRA plan to constructed in consultation with the DPI

EADRA plans from properties are to be constructed in consultation with the Department. Please ensure that you ask when these meetings will be held and attend the meetings.

EADRA Deed

Formalisation of the Emergency Animal Disease Response Agreement is to be completed during March 2021 AHA meetings. The egg, chicken and duck industries have come to the agreement with Government to share response costs but pay compensation costs for outbreaks only pertaining to their own industry. E.g. Outbreak on a layer farm would see compensation by the egg industry, incident on a chicken meat farm paid by the chicken industry and on a duck farm, compensation costs would be paid by the duck industry. Industries who are signatories to the EADRA Deed continue to encourage other industries to join.

Daily briefings and debriefings

Daily briefings are held each morning and debriefings each evening. When a incident response is working through decontamination, the attendance at meetings may reduce to debriefs and if two LLIs are working, e.g. One from eggs and one from chicken meat, a roster week about can be instigated.

LLI meetings

LLI meetings are conducted with the incident control officer and also the head of operations on a weekly basis.

The meetings allow for discussion in relation to information on such issues as disposal of birds, chemicals, and or issues with decontamination.

Queries from both industry and the Department can be worked through in much more detail than that which can be undertaken on a daily teleconference or meeting.

Frequently Asked Questions for affected farms – from AG Victoria

(Please note this is protocol from Victorian AI response in 2020 to give an overview of processes. These will likely differ between states so will be important to check with the relevant state agency.)

Agriculture Victoria has completed the cleaning and disinfection of your property following the diagnosis of avian influenza (AI) in your birds. There is still a small chance that residual virus persists. Between now and the time when the quarantine notice is revoked, you will need to continue to take all precautions to prevent the spread of AI virus. This fact sheet

provides information you may need once cleaning and disinfection is completed on your property and your property remains under quarantine.

CLEANING AND DISINFECTION PRINCIPLES

Following good biosecurity practices and hygiene is essential to protecting poultry and people from avian influenza (AI).

Cleaning and disinfection are important parts of biosecurity. To be effective against the AI virus, the following **two-step process** is recommended.

Step 1: Clean poultry housing, boots and equipment thoroughly to remove any organic matter (e.g. soil, mud, faeces) using water (preferably hot) and detergent.

Step 2: Apply a chemical disinfectant to cleaned surfaces and leave it on for the required contact time to destroy the virus. Contact times will vary between chemicals and different surfaces i.e. porous surfaces (wood) vs non-porous surfaces (metal).

DISINFECTANTS FOR AVIAN INFLUENZA VIRUS

Avian influenza virus is a Category A lipid enveloped virus, and it is stable over a pH range of 5.0-8.2.

The following options will be effective in destroying the AI virus on surfaces:

- soapy water or detergent (will strip the fatty envelope and kill the virus)
- acid and alkaline chemicals
- disinfectants, including bleach, chlorine and citric acid.

Whichever product you choose to use must be used as directed by the manufacturer.

Remember that chemicals may be toxic to poultry (and other animals), even in very small doses. Care should be taken to determine the safety of disinfectants prior to using them near poultry, and they should always be stored well away from poultry houses. If using a footbath at the entrance of a poultry enclosure, place it outside the enclosure, in an area where other animals (including pets) cannot access and drink from it.

DECONTAMINATION OF VEHICLES, ANIMAL HOUSING AND EQUIPMENT

If vehicles, livestock trucks and trailers, animal yards and equipment need to be decontaminated, the following two-step cleaning and disinfection process should also be used.

Step 1: Remove all visible organic matter (e.g. faeces, urine, dirt, mud) by washing the surface with water under pressure. When using a cleaning agent/detergent, follow the manufacturer's instructions, in particular, the right concentration of cleaning agent/detergent for the amount of soiling/organic matter present. Also, follow personal protective equipment (PPE) recommendations of the manufacturer.

Step 2: Apply an effective disinfectant, as directed by the manufacturer. It is wise to ensure that the disinfectant being used will not damage the product being cleaned (e.g. is not corrosive at the dilution rate being used). Follow all safety recommendations of the manufacturer.

FURTHER advice on disinfectants

For advice on chemicals effective against AI virus and their safe use around poultry, contact your veterinarian or the product manufacturer.

Requirements for decontaminating equipment

Does the clean/dirty line still exist?

Yes, there is a line that still delineates the 'clean' from the 'dirty' side until the quarantine of the property has been resolved. This prevents possibly infected material on the dirty side moving to the clean side.

What is the decontamination process for vehicles coming onto and off the property?

If they are coming from the 'clean' side and are grossly clean, then decontamination of the wheels will suffice.

Moving any equipment, including cars, from the 'dirty' side requires decontamination to ensure biosecurity standards are met. Pressure wash machinery to remove all visible contamination using a detergent wash followed by spray down with a suitable disinfectant to destroy any virus on the machinery including wheels, wheel arches.

What is the decontamination process for moving machinery between different sites on the same property?

Pressure wash machinery to remove all visible contamination using a detergent wash followed by spray down with a suitable disinfectant to destroy any virus on the machinery including wheels, wheel arches. Further information about decontaminating vehicles above.

Can I use items such a ride on mowers/tractors on the 'clean' side from 'dirty' side?

Yes, but they need to be decontaminated – see above.

Do feed trucks and egg dispatch trucks need to be decontaminated during the sentinel program?

The operator of the truck must:

- not drive on tracks used by affected livestock; and
- ensure the incoming vehicle is cleaned and disinfected on entry and exit from the premises; and
- ensure they maintain personal biosecurity procedures, including cleaning and disinfecting of boots on entry and exit from the premises and does not have contact with any affected livestock.

Who provides wash down equipment/machinery/chemicals, Ag Vic or is the farm to provide their own?

Owners are encouraged to discuss with Agriculture Victoria any ongoing needs for equipment and chemicals to decontaminate boots, vehicles and other items whilst the property remains under quarantine. Basic wash-down equipment is an essential biosecurity tool for all property owners, therefore it is recommended that where possible pressure washers, pump spray packs, tubs for boot washing/footbaths, etc. are purchased by owners to use as an ongoing process to prevent future disease incursions.

Does PPE still need to be worn entering and exiting a property under quarantine?

Yes, PPE still needs to be worn when entering a property under quarantine.

Recommendations include disposable coveralls or, a designated cotton pair of overalls (only to be worn on farm) and/or designated footwear such as work boots or gumboots (only to be worn on farm). If there is any residual virus on the quarantine property this prevents further spread.

Is foot bathing required?

Footwear must be scrubbed and washed when exiting a quarantined property with a disinfectant that will kill avian influenza. All dirt, faeces and other contamination needs to be thoroughly removed if the footwear is taken off the quarantined site. It is good

biosecurity practice to use foot baths at the entry to each shed or free-range area to minimise the risk of any disease spreading between flocks on a property.

What happens with PPE rubbish re disposal?

All disposable PPE should be bagged and decontaminated off the quarantine property. Agriculture Victoria can arrange for disposal.

Who do I get in touch with if I need help with decontamination?

Contact your case manager or Dr Dianne Phillips as project lead. Phone Agriculture Victoria on 136 186.

Next steps

What are the next steps once cleaning and disinfection is complete?

The properties will be 'shut' for a period that varies depending on the production system in place on the farm, followed by a period where sentinel birds are introduced to range over the property. These birds are monitored with weekly testing and once a period of testing is completed a report can be given to the CVO requesting resolution of the property's status.

When is quarantine going to be lifted?

Properties will remain under quarantine until all cleaning and disinfection activities have been finalised and the requirements of the farm's property resolution plan have been completed. Property resolution plans outline the process, agreed between Agriculture Victoria and property owners/managers, that will enable the successful reestablishment of a healthy flock on previously infected premises.

How much longer will Agriculture Victoria continue to supervise the sites after C&D activities are completed?

Agriculture Victoria staff will remain on site until all cleaning and disinfection activities have been completed. Thereafter, staff will liaise with owners/managers to address any issues as they arise. All properties have been assigned a case manager who will continue to provide a point of contact for property owners/managers - answering questions and providing ongoing information as required.

What is the testing procedure for sentinel flocks?

On properties where sentinel birds are used as part of the property resolution plan, the birds will undergo health monitoring and a series of tests over several weeks. Sentinel birds must be sourced from Salmonella Enteritidis-free flocks and must pass pre-placement testing for Salmonella Enteritidis and avian influenza virus. After placement on the property, sentinel birds will be tested for avian influenza virus weekly for three weeks. Their general health will be monitored throughout the sentinel program.

What happens to the sentinel birds when the three weeks is up?

Provided the sentinel birds remain healthy throughout the property resolution process and there are no unresolved investigations involving birds on the premises, the birds may be reclassified from sentinel to commercial. The owner is free to decide the future of these birds.

Who pays for this?

Owners will be required to source and pay for the sentinel birds used on their property and will be responsible for all placement, removal, feed, medication, husbandry and management costs required to place, maintain and eventually remove the birds. All avian influenza testing and inspection costs will be paid by Agriculture Victoria. If chickens (including spent hens) are used, then testing prior to placement to exclude *Salmonella* Enteritidis, will be the owner's responsibility to arrange and will be at the owner's cost.

Is cleaning required again?

Following successful completion of the property resolution process there is no further requirement to undergo any further cleaning and disinfection on the property. Owners are encouraged to maintain good biosecurity procedures such as footbaths, restricted vehicle access and personnel management to bird areas, etc. to minimise the risk of future disease incursions. Further information is available at <https://www.farmbiosecurity.com.au/>

Permits

Will permits be required?

While there is still a Restricted Area and Control Area in place, permits to move vehicles, livestock, livestock product, fittings (equipment), fodder will be required (as per current arrangements).

Maintenance, visitors, workers will need a permit/written authority to enter the quarantined area.

People who live on site will continue to do as they have been.

Feed trucks do not require a permit but the above disinfection procedures must be followed.

Can eggs and manure be moved offsite?

Manure can be stockpiled on the property until the quarantine is lifted.

Eggs collected during the sentinel period need to remain on-site. While the sentinel program is in place the eggs cannot be moved for sale or pasteurisation. Liaise with Agriculture Victoria to discuss individual farm needs.

Legal

What are my legal responsibilities?

Report suspicion of infection with avian influenza or any other notifiable diseases in your birds or animals on the property by calling the all-hours emergency animal disease hotline on 1800 675 888.

For more information about other requirements that apply to keeping poultry visit agriculture.vic.gov.au/livestock-and-animals/poultry-and-eggs

Can I sell my farm?

Yes, however if the farm is under quarantine you must advise your solicitor so that they can consider the disclosure of the quarantine notice under Section 32 of the *Sale of Land Act 1962* on the Vendor Statement should you decide to sell all or part of the affected land. If birds or manure have been buried on the property you must also advise your solicitor so that its disclosure can be considered.

Contact

Who do I contact if I have a question?

Contact your case manager or Dr Dianne Phillips, project leader. Phone Agriculture Victoria on 136 186.

Who do I contact if my birds are sick?

Contact your vet or ring the all-hours Emergency Animal Disease Watch Hotline.



Where Can i get more information?

More information on AI is available on the Agriculture Victoria website:

agriculture.vic.gov.au/avianflu.

Accessibility

If you would like to receive this information/publication in an accessible format (such as large print or audio) please call the Customer Service Centre on 136 186, TTY 1800 122 969, or email customer.service@ecodev.vic.gov.au.

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Avian Influenza (AI)

What is Avian Influenza?

Avian influenza, commonly referred to as 'bird flu', is a highly contagious viral infection of birds. Serious forms of the disease can cause severe symptoms and sudden death in domestic poultry (up to 100 per cent of birds). Mild strains of the disease cause few or no symptoms in poultry and may go undetected in some species of birds, though can result in some deaths.

What species are affected?

Domestic poultry, ducks, geese, turkeys, guinea fowl, quail, pheasants, emus and ostriches are most susceptible to being affected by avian influenza. Many species of wild birds, including waterfowl and seabirds can carry the virus but usually show no signs of disease.

How is the avian influenza virus spread?

Infected birds shed the avian influenza virus in saliva, nasal secretions and faeces.

Wild birds are considered the natural host for the virus and usually carry it without showing any symptoms of the disease.

Sometimes the virus spills over from wild birds into domestic bird populations and may cause disease. This can occur through either direct contact between wild and domestic birds, or indirectly through the contamination by wild birds of feed or water of domestic birds.

What are the symptoms?

Symptoms associated with avian influenza can include:

- sudden death
- respiratory distress
- swelling of the head
- purple discolouration of the comb and wattles
- coughing
- sneezing
- rasping breathing
- rapid decrease in feed and water intake
- decreased egg production
- ruffled feathers
- depression
- closed eyes
- diarrhoea
- occasionally nervous signs

Source: Ag Victoria

Infectious Bursal Disease (IBD)

(As at January 2021)

Infectious bursal disease (IBD), also known as Gumboro Disease in its virulent form, is a highly contagious viral infection that is found in chicken flocks in most countries. The severity of the disease will depend on the age and breed of chicken (White Leghorns are more susceptible than broilers and brown-egg layers) and the virulence of the virus. Australian strains of IBD virus are of mild virulence and do not cause clinical disease.

Signs of the disease can include a rapid drop in feed and water consumption, mucoid (slimy) diarrhoea with soiled vent feathers, ruffled feathers, listless chicks with unsteady gait or sitting in hunched position, picking at own vent and sleeping with beak touching the floor.

Infections before 3 weeks of age are usually subclinical (no detectable symptoms). Chickens are most susceptible to clinical disease at 3-6 weeks and severe infections have occurred in Leghorn chickens up to 18 weeks old.

Early subclinical infections are the most economically important as the disease can cause severe, long-lasting suppression of the immune system. Chickens that are immunosuppressed by early IBD infections do not respond well to vaccination and are more susceptible to other diseases, including those that don't normally affect healthy chickens.

In clinical infections, onset of the disease is sudden after an incubation of 3-4 days. Mortality is usually low but has been reported to be as high as 20%. Recovery from the disease usually occurs in less than a week, however broiler weight gain is delayed by 3-5 days. The presence of maternal antibody (antibody passed to the chick from the mother) will modify the way the disease progresses. The virulence of field strains varies considerably. Very virulent (vvIBD) strains of the virus that cause high mortality and morbidity were first detected in Europe, and have not yet been detected in Australia.

What causes infectious bursal disease?

Infectious bursal disease is caused by a birnavirus (IBDV) that is most readily isolated from the bursa of Fabricius which is an organ of the immune system. The virus can also be isolated from other organs during an outbreak. It is shed in the faeces and spreads between birds or by contact with a contaminated environment and is also carried in dust. The virus can be transferred from house to house on fomites (any inanimate object or substance that is capable of carrying infectious organisms from one individual to another), flies and rodents. The virus is very stable and difficult to eradicate. There is no vertical transmission (from parents directly to offspring) and mealworms and litter mites may harbour the virus for 8 weeks. Infected birds shed large amounts of virus for up to 2 weeks after infection.

Prevention and treatment of infectious bursal disease

There is no treatment for IBD but support therapies such as vitamin and electrolyte supplements and antibiotics to treat any secondary bacterial infections, may reduce the impact of the disease.

Depopulation and rigorous disinfection of contaminated farms have achieved some limited success in reducing the viral load. Prevention is through good biosecurity and vaccination, including passive protection via breeders and vaccination of progeny depending on

virulence and age of challenge. In most countries, breeders are immunised with a live vaccine at 6-8 weeks of age and then re-vaccinated with an oil-based inactivated vaccine at 18 weeks. Birds that have recovered from a natural infection have a strong immunity. If maternal antibody was still high at the time of vaccination, immunity in chicks that receive live vaccine can be poor.

Due to the high degree of variation between naturally occurring IBD viruses there are a number of vaccines available. Vaccines need to be selected based on the types of viruses present in the area. The disease is believed not be present in New Zealand. The Australian field strains of IBD are relatively mild and live vaccination of broilers and rearing pullets is not regarded as necessary. The main method of control relies on vaccination of parent chickens and transmission of maternal antibody to the chicks.

Source: Poultry Hub

Newcastle Disease

(As at January 2021)

Following are notes to help you as the LLI should a Newcastle Disease response need to be undertaken.

What is Newcastle Disease?

Newcastle disease is an infection of domestic poultry and other bird species with virulent Newcastle disease virus (NDV). It is a worldwide problem that presents primarily as an acute respiratory disease, but depression, nervous manifestations, or diarrhea may be the predominant clinical form.

Virulent Newcastle Disease is classified as an emergency disease in Australia. Avirulent forms of the virus are endemic in most regions of Australia. The last outbreak in Australia in 1998 was due to the mutation of an Australian strain into a more virulent form.

Key points

The incubation period for ND is usually 2-6 days in chickens but can be up to 15 days. For tracing purposes, 21 days is deemed to be the longest possible incubation period.

Virus is excreted about 2 days after infection, but about 24 hours before clinical signs. The virus is relatively stable and can remain infectious for many months in the environment, and remains viable in animal products for long periods.

Many avian species are susceptible to infection, so wild birds can be a source of infection.

What are the signs?

The main signs can be respiratory, intestinal or nervous, or combinations of all three:

- sneezing.
- nasal discharge.
- coughing.
- greenish, watery diarrhoea.
- depression.
- muscular tremors.
- drooping wings.
- complete paralysis.

What is the treatment?

There is no treatment for Newcastle Disease should a hen be infected, all suspect cases should be treated as a suspect emergency disease and your private veterinarian or local government veterinary officer notified.

Vaccination Program

As part of the ongoing response from the 1998 outbreak, the National Newcastle Disease Management Plan has implemented a national vaccination program to swamp any residual

virulent virus in the poultry industries. As a result, all layer hens in Australia must by law be vaccinated against Newcastle Disease in the first two to four weeks of life, and again during rearing (see vaccination table below).

Humans and Newcastle Disease

Virulent Newcastle disease (VND), formerly exotic Newcastle disease, is a contagious viral avian disease affecting many domestic and wild bird species; it is transmissible to humans. Human infections are very uncommon, with most cases being in people who handle the virus in pure form, such as laboratory workers. Though it can infect humans, most cases are non-symptomatic; rarely it can cause mild flu-like symptoms and/or conjunctivitis. There is no risk to human health from eating poultry or poultry products.

Bird category	Age of birds at vaccination ⁷	Tasmania, Western Australia	Queensland, South Australia	New South Wales, Victoria
Layer breeders	2-4 weeks, and 12-18 weeks, or 12-14 weeks and every 6 to 8 weeks thereafter	Live V4, and Inactivated ND vaccine, or Live V4		Inactivated ND vaccine Not permitted ⁸
	2-4 weeks, and 12-18 weeks, or 12-18 weeks and every 6 to 8 weeks thereafter	Live V4, and Inactivated ND vaccine, or Live V4		
Laying hens and pullets (grown in cages during the vaccination program)	2-4 weeks, and 6-8 weeks, and 10-14 weeks ⁹ , or 10-14 weeks and every 6 to 8 weeks thereafter	Live V4, and Live V4, and Inactivated ND vaccine, or Live V4		Inactivated ND vaccine Not permitted ⁸
	2-4 weeks ¹⁰ , and 10-14 weeks ¹¹ , or 12-14 weeks and every 6 to 8 weeks thereafter	Live V4, and Inactivated ND vaccine, or Live V4		Inactivated ND vaccine Not permitted ⁸
	Day-old, or 7-14 days	Optional: Live V4 as coarse spray ¹² Optional: Live V4 in drinking water	Live V4 as coarse spray, or Live V4 in drinking water	