



Information for Producers



Issued by

The Poultry Industry Association of New Zealand and the Egg Producers Federation of New Zealand

This Information Sheet on infectious bursal disease (IBD) explains why the maintenance of New Zealand’s IBD free status is so important to New Zealand poultry producers and consumers and what is being done by the wider poultry industry to ensure that the New Zealand poultry flocks remain IBD free.

New Zealand has a unique poultry health status

New Zealand has a unique poultry health status and is the only country in the world that is free of all three major diseases affecting poultry. These three diseases are infectious bursal disease (IBD), Newcastle disease (ND) and highly pathogenic notifiable avian influenza (HPNAI).



Biosecurity, both on-farm and at the border, is important in ensuring that New Zealand remains free of the three major diseases affecting poultry.

What is infectious bursal disease?

Infectious bursal disease (IBD) is an acute contagious viral disease of young chickens. Also known as “Gumboro disease” after Gumboro, Delaware where the first outbreaks occurred, IBD was first recognised as a specific disease entity in 1962.



The target organ of the IBD virus is lymphoid tissue and in particular the bursa of Fabricius, an important organ in the development of the chickens’ immune system. Consequently, infection with IBD potentially leaves the young chicken with a reduced ability to mount an immune response and they are therefore less able to fight off other diseases.



Not only are the birds more susceptible to other diseases following infection with IBD, but they don’t respond well to vaccination, which is an essential part of the poultry management system.

IBD is generally accepted as endemic in all other countries around the world and, depending on the strain, can cause varying levels of mortality in affected birds.

New Zealand is the only country in the world that is free of infectious bursal disease.

How is IBD spread?

IBD is highly contagious and spreads easily between infected and susceptible birds. Contaminated feed, water and faeces may act as sources of the virus for at least 52 days, while the virus is capable of remaining infective for at least 122 days in poultry houses.

IBD virus is a very hardy virus, resisting very harsh environments including severe (by biological standards) heat treatment. The virus can survive in poultry and on poultry products, including packaging for extended time periods.

Why is New Zealand's freedom from IBD so important to poultry farmers?

The absence of IBD has many benefits to the New Zealand poultry industry. Very virulent strains of IBD virus, which emerged in the late 1980's, have caused serious disease in poultry in many countries around the world. These strains of the virus are of particular concern to New Zealand producers, due to the high levels of mortality and morbidity in affected flocks.



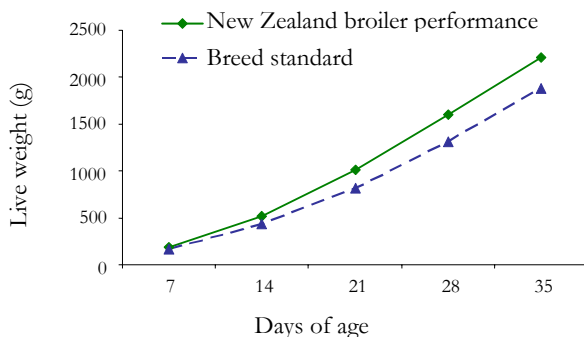
successful, some level of immune response is required and the animal

QUICK FACT

IBD does not affect humans.

will inevitably incur some physiological cost in initiating the response. While the physiological cost of a vaccine response is likely to be considerably less than that required in a disease response there is, nevertheless, a cost incurred.

Production benefits as a result of disease freedom are clearly evident in the New Zealand broiler industry which is internationally renowned for the



high biological performance achieved across the industry. Average live weight gains and feed conversion ratios achieved on New Zealand broiler farms are often better than the expected breed standard. This improved performance is attributable to a combination of factors, including high levels of animal husbandry and on-farm management, good climatic conditions for broiler production and, in particular, high levels of on-farm biosecurity and freedom from disease. Although less

obvious in the New Zealand layer industry, production benefits (for example in terms of egg output and feed conversion ratio) as a result of freedom from IBD also exist. Less virulent strains of IBD virus are also a cause for concern as, although these do not cause levels of mortality as high as those observed for very virulent strains, the effect of viral replication on the bursal tissue is similar and potentially leaves the young bird with a sub-optimal immune system. Routine vaccination against other diseases may then be required. As with very virulent strains, morbidity rates of up to 100 % are usually observed for less virulent strains.

QUICK FACT

IBD does not affect egg or meat quality.

Because of the lack of obvious clinical symptoms in birds affected by some strains of less virulent IBD, these strains could easily spread between flocks, remaining undetected for some time. The continued serological testing of poultry flocks is therefore essential in maintaining New Zealand's disease freedom.

The presence of any strain of IBD in New Zealand would have a significant impact on the cost of production for poultry and this would impact directly on the profitability of any poultry producer.

QUICK FACT

IBD is caused by an Avibirnavirus belonging to the *Birnaviridae* family.

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Has there ever been a case of IBD in New Zealand?

Between 1980 and 1992, a number of studies directed at detecting IBD virus in New Zealand poultry were conducted. These studies showed that New Zealand was free of IBD.

In late 1993, lesions suggestive of IBD were reported by a poultry processing plant, and the presence of a non-pathogenic or mild strain of IBD was confirmed following further investigation.

QUICK FACT

No classical acute outbreaks of IBD have ever been reported in New Zealand.

Epidemiological investigation of the outbreak, including a nationwide survey of all commercial breeding, broiler and layer flocks, suggested that a contaminated or incorrectly labelled vaccine may have been the cause of the outbreak.

Was IBD eradicated from New Zealand?

Although no clinical symptoms of IBD were observed, bursal lesions were consistently observed in infected broilers. This suggested that there may be some potential for production losses and, consequently, the poultry industry implemented a programme to eradicate IBD virus from New Zealand in 1994.

Normal (left) and atrophied bursa following infection with IBD virus



Infected farms, identified by serological testing, were decontaminated following a detailed protocol. This protocol involved strict movement controls (for personnel, vehicles and equipment), shed and farm clean out, sanitation procedures and stand down periods.

Ensuring New Zealand remains free of infectious bursal disease

How do we know New Zealand is IBD free?

A routine surveillance programme was implemented by the poultry industry a number of years ago. Under this programme, all commercial poultry units (including both egg and broiler producers) are tested regularly. Blood samples drawn from the birds in each of the sheds are sent for testing at an approved laboratory.



What stage is the programme at ?

Because of the Industry's excellent biosecurity measures and the cooperation from its members, the Industry is at a stage where it can make a submission to MAF for a declaration of freedom from the infectious bursal disease in the commercial sector.

Where do the results go?

All test results, which are confidential, are stored in a database managed by the PIANZ and EPF office. This database is part of quality system which will enable New Zealand to gain international recognition of its IBD free status.



QUICK FACT

IBD (exotic strains) is listed as an Unwanted Organism by Biosecurity New Zealand.

How does this affect me?

As a poultry meat or egg producer, on-farm biosecurity plays an important role in keeping your flock healthy and ensuring optimal profitable production. The health status of the national flock is also important as, although it may not affect you directly, any exotic disease outbreak could affect the potential sales of your product and the profitability of your business. It is essential therefore that all New Zealand poultry farmers take a pro-active role in maintaining the major disease free status of the national flock.

How is the testing programme run?

Your questions about the testing programme answered.

1. Will birds on my farm be tested?

Currently all layer farms over 1 000 birds are tested. In later stages, all commercial chicken farms in New Zealand will be tested .

2. How many birds are tested?

Samples are collected from 12 birds in each shed.

3. What samples are collected?

Blood samples are collected.

4. Who collects the blood samples?

Layer hens samples are often collected by hatchery representatives. In some cases, a certified IBD blood tester may be contracted by the EPF to undertake sample collection.

Blood samples from **broiler birds** are collected at the processing plant.

5. Are ducks tested as part of the programme?

No. At this stage only chickens are being tested.

6. How often are samples collected?

New farms are tested three times in the first 18 months. If all these tests are negative, the farm is “Accredited Free”. Testing is then carried out on an annual basis.

7. Will I get a letter or certificate to show I am “Accredited Free of IBD”?

No. All the data for laying hens is held in a database at the EPF office. Data for broiler farms is held by the broiler processing company and then submitted on a regular basis to the PIANZ office.

8. What is the cost of the testing?

The cost of testing is met by the industry.

9. Do I have to take part in this programme?

Yes. Purchase of layer chicks from a hatchery is conditional that a hatchery representative or other certified IBD blood tester can visit the flock and sample the birds.

What are the symptoms of IBD?

Clinical symptoms of IBD infection are usually observed 2 – 3 days after exposure. The symptoms are not specific, but generally include:

- a tendency for birds to pick at their own vent
- depression and loss of appetite
- a reluctance to move
- ruffled feathers
- trembling
- watery diarrhoea
- sudden death



As many as 100 % of the birds can be affected by the disease. In the case of very virulent IBD, mortality may be as high as 60 %, although 20 – 40 % is usual. The disease course usually takes 5 – 7 days.

Although the symptoms of IBD can be similar to those of other common poultry diseases, if you suspect that your poultry are infected with IBD then you must call your vet or the

**MAF Exotic Disease
Hotline:
0800 809 966**

For more information visit our websites:

www.pianz.org.nz

www.eggfarmers.org.nz

