



To: Hon Andrew Hoggard, Minister for Biosecurity
From: Stuart Anderson, Deputy Director-General Biosecurity New Zealand

Preparing for High Pathogenicity Avian Influenza

Date	15 May 2024	Reference	B24-0348
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Decision required	Date decision required by
YES <input type="checkbox"/> / NO <input checked="" type="checkbox"/>	N/A

Other agencies/industries consulted on during the production of this briefing
Department of Conservation <input checked="" type="checkbox"/> Ministry of Health <input checked="" type="checkbox"/>

Purpose

- This briefing provides further information about High Pathogenicity Avian Influenza (HPAI) and updates you on Ministry for Primary Industries (MPI) HPAI response planning. It builds on the previous briefing on this topic (B24-0014 *High Pathogenicity Avian Influenza*) from April 2024.

HPAI key points

- The Ministry for Primary Industries (MPI) is working with the Department of Conservation (DOC), the Ministry of Health (MOH), and industry stakeholders on plans to mitigate the impact of HPAI if it arrives in New Zealand. Unlike many biosecurity threats, HPAI is not expected to be brought to New Zealand by human activity, but rather by migratory wild birds. For this reason, it is not likely that it could be kept out of New Zealand over the long-term or eradicated once it establishes in the wild bird population.
- There are a wide variety of avian influenza viruses – the group of strains that cause mortality in birds are referred to as HPAI. In 2020 a strain of HPAI emerged that is well-adapted to spread on migratory birds, and has spread across the northern hemisphere, Africa and the Americas. In February of this year, it was confirmed that this strain has reached the Antarctic Peninsula, south of Argentina.

3. HPAI can impact conservation species, waterfowl, small-scale poultry flocks and commercial poultry production. HPAI can also spill over from birds to mammals, with a small number of human cases recorded. Multiple other mammal species have been infected, with cattle in the United States (US) being the most recent finding (Paragraph 39 refers).
4. HPAI is not present in New Zealand, Australia, or the South Pacific. It has recently reached the Antarctic peninsula and is expected to spread across the Antarctic land mass and reach the Ross Sea Region south of New Zealand. The timing of this progression is unclear, but estimates suggest that this could occur during the next 12 months. As the disease spreads, the risk of it entering New Zealand increases.
5. Impacts on the poultry sector, especially on free-range producers with limited poultry housing, are expected to be severe. Rigorous on-farm biosecurity is successfully used overseas to protect commercial poultry from infection, but it is not possible to fully protect free-range poultry from infection by wild birds. In the United Kingdom (UK), the government put in place a mandatory order requiring all poultry to be housed indoors from November 2022 – this was progressively lifted on a regional basis through the first half of 2023.
6. The implementation of rigorous on-farm biosecurity in New Zealand now, before an incursion, has the potential to protect individual farms from infection and to limit impacts on the domestic supply of poultry meat and eggs. MPI's response will support the sector in adoption of safe practices to meet the response objectives, safeguard human and animal welfare, and manage Crown liability under the Biosecurity Act 1993.
7. The impacts on wild birds and marine mammals may be significant but cannot be quantified in a New Zealand context as highly variable impacts have been observed in other parts of the world.
8. The World Health Organization currently assesses the 'overall public health risk posed by HPAI to be low, and for those with exposure to infected birds or animals or contaminated environments, the risk of infection is considered low to moderate.
9. Clear and aligned messaging from Ministers and relevant agencies will be required in the event of an incursion. Impacts on biodiversity, agriculture, and trade are expected to arise. There is also the possibility of human health impacts, but these have not been a major issue at the population level with this strain to date.

HPAI response strategy

10. As outlined in briefing B24-0014 (*High Pathogenicity Avian Influenza*), it is unlikely that national eradication will be feasible due to both the likelihood of re-introduction by migratory birds and the impossibility of eradicating the virus in wild bird populations.
11. Impacts on the poultry industry are best managed by the poultry industry implementing farm-specific biosecurity measures, supported by MPI.

12. The objectives for a HPAI response are to:
 - a) reduce the impact on native species and biodiversity;
 - b) reduce the impact on the poultry sector;
 - c) maintain supply of poultry meat and eggs to the domestic market and maintain access to overseas markets where possible; and
 - d) protect human health.
13. A One Health approach is being adopted as this strain of HPAI has potentially significant impacts on the poultry sector, wildlife and biodiversity, and public health. One Health is “a collaborative, multisectoral, and transdisciplinary approach ... to tackle complex health challenges at the human-animal-environmental interface”. MPI, DOC and MOH are working together to develop response options that represent the best approach for New Zealand to protect our unique native species, mitigate the impact on the poultry sector and take preventative measures to protect human health.
14. MPI is drafting a Cabinet paper for your consideration, setting out some decisions that could be taken in advance of an incursion. This would clarify the expectations of different parties around the nature and scope of Crown involvement and the responsibilities of the relevant agencies and industry. Following receipt of this briefing, we will discuss these options and the framing of the Cabinet paper with you.

New Zealand context

15. To ensure the continuation of their international exports of poultry commodities, Canada, the US and the UK currently use legal powers to limit spread of disease. This ensures they can return to freedom in poultry according to the World Organisation of Animal Health (WOAH) code chapter on HPAI. The use of legal powers has come at a substantial compensation cost for these countries, with compensation in the US reaching USD \$500 million in 2023 alone.
16. UK officials have shared their observation that as endemic stability is reached in wild birds, fewer spillover events are occurring into domestic poultry. Despite the decreased infection pressure, continued biosecurity measures to limit contact between commercial poultry and wild birds are required. This decrease in spill-over events from wildlife to poultry is only occurring now in the 4th year of their response to this strain.
17. With a small domestic-focused poultry sector and limited exports of poultry genetics and commodities, the options for how New Zealand best responds to an incursion of HPAI into poultry differ from those of the countries mentioned above.
18. Figures from 2022 show that New Zealand produced over 119 million chickens from 151 farms, largely for the domestic market. The value of the chicken meat industry to New Zealand in 2022 was roughly \$1.8 billion, with international trade accounting for only a small percentage of this figure.

20. In 2022 there were around 130 commercial egg farms, producing over 90 million dozen eggs per year. In late 2022, industry reported \$286 million in annual retail sales of eggs, with production types being approximately one third each for colony cages, barn-laid and free-range. This change towards free-range has been driven by changes in consumer expectations as well as the updated regulations. The regulations were introduced in 2012 through a Code of Welfare (Layer Hens), which required a decade-long phase out of battery cages for all layer hens with full prohibition by 2022.
21. The industry directly employs over 3,500 workers across the country and is a substantial user of grain from the New Zealand arable industry.
22. The total value of poultry meat and meat products, and egg and egg product, exported from New Zealand in 2022 was \$138.4 million. In 2024, this is expected to be approximately \$175 million. Poultry meat and meat products contribute over 46 percent of the value of poultry exports, with the export of genetic material in the form of fertile eggs or day-old chickens contributing over 42 percent. Eggs and egg products make up approximately 12 percent of the value of exports.
23. Response costs for a stamping out effort in commercial poultry are difficult to accurately estimate. A recent example from the response to *Salmonella enteritidis* (SE) in 2021 resulted in depopulation and disposal of 70,000 birds, ^{9(2)(j)} [REDACTED] across 14 sites. This response was carried out under the Animal Products Act 1999 (APA), and not the Biosecurity Act 1993. For the SE response, the use of the APA was assessed as the most appropriate legal framework, largely because that particular sequence of SE was not listed in the Unwanted Organisms Register under the Biosecurity Act (HPAI is listed). The APA also provided for the necessary tools to deliver a response effort, including imposing movement and other controls.
24. The Animal Products Act does not provide for compensation payments to farmers/parties impacted by disease control measures. ^{9(2)(j)} [REDACTED]
[REDACTED] Ex-gratia payments are made at the discretion of MPI.
25. ^{9(2)(g)(i)} [REDACTED]

9(2)(g)(i)

Building Poultry Industry Resilience to an HPAI Incursion



26. An adjustment to the New Zealand way of poultry farming to protect domestic supply of commodities is a sustainable way to prepare for an incursion of HPAI into New Zealand with wild birds over the long term. This will in turn enhance New Zealand's domestic poultry food security and resilience to any future biosecurity threats.
27. Significant biosecurity measures have been identified as effective at preventing infection of poultry by wild birds in affected countries. These include requiring use of footbaths and clothing changes when staff move between production houses, regular disinfection of equipment and hard surfaces, and preventing wild bird access to supplies of litter and feed. In late 2022 the UK also imposed a compulsory housing order requiring all poultry to be kept indoors – this remained in place for approximately six months in most regions until infection pressure decreased. The implementation of increased biosecurity measures in New Zealand before an incursion has the potential to protect individual farms from infection, and to limit impacts on the domestic supply of poultry and eggs.
28. MPI is working with the poultry industry to enhance their resilience in the face of a prolonged HPAI incursion. This will be the primary focus for readiness activities relating to the poultry industry over the coming months. The initial focus is to work with industry to understand the current state of biosecurity preparedness, industry experience overseas, and provide advice and guidance to minimise on-farm risk.
29. Initial indications suggest that larger commercial enterprises will be well-equipped to limit biosecurity risk of HPAI. The smaller enterprises, especially free-range farms with limited housing, may struggle to limit their exposure risk.
30. An opportunity to support the sector in adoption of safe practices will help protect the industry, safeguard human and animal welfare, and manage future liability under the Biosecurity Act.

HPAI and Trade

Industry surveillance for trade

31. To enable the export of day-old chicks and hatching eggs, there is poultry export testing for avian influenza to meet Overseas Market Access Requirements (OMAR). This process is managed by the poultry industry, with lab results being provided to MPI. All non-negative samples are sent to MPI's Animal Health Laboratory for confirmatory testing.
32. MPI is currently working with the poultry industry designing an enhanced Low Pathogenic Avian Influenza (LPAI) surveillance programme for poultry, as additional surveillance data on LPAI will be required to meet WOAHP standards for surveillance should a detection of HPAI viruses be made in wild birds.

Trade implications

33. There are trade implications if any form of Avian Influenza is detected in a poultry flock. A number of our export health certificates claim that New Zealand is free of HPAI and/or Avian Influenza. ^{6(a)}

34. ^{6(a)}

35. The Avian Influenza attestation also appears on a number of day-old chick and hatching eggs and poultry animal product certificates. As of 2024, the total value of New Zealand's trade in day-old chick and hatching eggs and poultry animal products is around \$175 million per annum.
36. MPI has been working with industry to develop options for voluntary biosecurity 'compartments', defined by WOAHP as sub-populations with a distinct biosecurity status maintained by management practices or geographic exclusion. Consultation on a proposed Compartment Notice for hatching eggs and day-old chicks closed in late April 2024. We are on track to issue the Notice by 1 July 2024. If a compartment or compartments were established, they would be designed to maintain freedom from a number of poultry diseases in addition to HPAI. The Notice when issued may allow some continuation of exports without requiring a return to country disease freedom as articulated in the WOAHP HPAI disease specific chapter.

37. ^{6(a)}


Impacts on Mammals

38. The current strain of HPAI has been reported in a range of other mammals, including goats, dogs, cats, pigs, bears, skunks, racoons and mink, plus marine mammals including dolphins, seals and sealions.
39. Infected mammals generally live in close contact with dense bird populations and/or consume infected birds.
40. A multi-state outbreak (9 states, 42 infected herds) of HPAI in dairy cows was first reported on 25 March 2024 in the US, originating in Texas. This is the first time HPAI has been found in cattle. While still related to the globally dominant circulating strain of HPAI, this genotype has only been found in the US, and to date only in lactating dairy cattle. No evidence of any HPAI infection in cattle has been observed anywhere outside of the US, despite HPAI being well established in European countries with large dairy industries.
41. US federal officials have instituted a testing programme for dairy cattle moving between states to limit further spread of the event. The spillover event from wild birds to cattle in the US is highly likely to be the result of particular environmental and production circumstances.
42. Should such an event occur in New Zealand, our legal framework and existing work to ensure the continuity of processing of milk in the event of an Foot and Mouth Disease outbreak puts us in a strong position to institute targeted measures at individual farm level to stop product from affected animals entering the supply chain. Regular discussions are occurring with New Zealand's cattle industry via the Livestock Sector Biosecurity Council on developments and lessons from the US situation, and on-farm biosecurity controls that would help mitigate the risks to livestock in New Zealand.
43. On 8 May, WOAHA advised that initial investigations have shown that raw milk from infected cows is a high-risk material, stating that only milk produced by healthy cows should be used commercially. There is evidence of virus transmission from infected lactating cows to other animals including cows, cats and poultry. No specific adaptation of the virus to either humans or mammals has been identified. Several studies are being carried out to further explore the pathogenesis and transmission routes of these viruses, including among cattle and from cattle to other animals.
44. According to the New Zealand Food Safety Science and Research Centre, it is important to note that if HPAI virus gets to New Zealand meat and milk from infected animals would still be safe to consume, provided the meat is properly cooked, and the milk is pasteurised. The presence of the virus would be a further reason why the drinking of raw milk is not advised, as HPAI would add to the range of bacterial and viral pathogens that we already know can be present in raw milk.
45. New Zealand Food Safety has undertaken a food safety risk assessment for the New Zealand context. The conclusions align with the current international thinking that the foodborne risk to human health from HPAI is negligible (commercial foods) to low (non-commercial). Under section 85 of the Animal Products Act, the Director-General has a power to recall animal products for the purpose of examining, reclassifying,

rectifying or disposal of animal product that is not fit for intended purpose or whose fitness is in doubt.

46. In the US, pasteurised milk from cattle infected with HPAI has tested PCR-positive for HPAI genetic material. The Food and Drug Administration has been doing follow-up testing and reports "*New preliminary results of egg inoculation tests on a second set of 201 quantitative PCR-positive retail dairy samples...show that pasteurisation is effective in inactivating HPAI.*"¹ It is likely that the PCR testing is detecting fragments of viral DNA, but there is no live active virus capable of causing infection. Current evidence supports pasteurised dairy products being safe to consume.
47. Cat infections with HPAI have been reported in the US, Poland, South Korea, and France. These cats demonstrated varying degrees of clinical symptoms, including respiratory and neurological signs, and some mortality. Infection is thought to have occurred via exposure to infected birds, eating raw poultry meat or, in the US, drinking of raw milk. There is currently no evidence to suggest cat-to-cat transmission is occurring.
48. Pigs are known to be infected by Influenza A viruses, however infection of the current H5N1 strain in pigs has not been widely reported. Current scientific evidence shows that pigs have a low susceptibility to avian-derived strains of HPAI (that is; virus isolated from chickens and given to pigs for testing).
49. When pigs have been tested with the mink-derived strains that have mammalian adaptations present, replication of the virus can be found. The virus is mainly found in the lower respiratory tract, inducing acute pneumonia. In these studies, no disease-induced mortality has been observed. The key finding of these studies is that pig-to-pig transmission was not occurring, likely due to very low virus shedding through nasal secretions. This implies that further mammalian adaptation would be required for pigs to become a serious HPAI disease vector.

Surveillance

50. There are several streams of surveillance underway aimed at detecting HPAI should it arrive in New Zealand or the Ross Sea region of Antarctica. These include:
 - a) a passive surveillance stream complemented by the notifications through Biosecurity New Zealand's Exotic Pest and Disease hotline. Industry and private veterinarians have received updated information on recognising HPAI in birds and spill-over events to mammals;
 - b) DOC staff in the sub-Antarctic islands and Antarctic New Zealand staff at Scott Base have been issued sampling kits and detailed training and instructions on how to collect samples for HPAI and submit them to the MPI Animal Health Laboratory;
 - c) surveillance of migratory birds and shorebirds not displaying clinical signs of H5N1 Avian Influenza is underway via a contract between MPI and Dunedin Wildlife Hospital. This began in September 2023;

¹ Updates on Highly Pathogenic Avian Influenza, 1 May 2024, US Food and Drug Administration

- d) Dunedin and other wildlife hospitals will continue to report birds with suspected avian influenza symptoms via the 0800 number;
 - e) study of the ecology and evolution of Low Pathogenicity Avian Influenza viruses (LPAI) viruses circulating in New Zealand, run by MPI's Animal Health Laboratory, involving the sampling and testing of mallard ducks in conjunction with a Fish and Game New Zealand annual banding programme to track duck numbers; and
 - f) poultry export testing for avian influenza to meet OMAR and enable export of day-old chicks and hatching eggs. Managed by the poultry industry, with lab results being provided to MPI. All non-negative samples are sent to MPI Animal Health Laboratory for confirmatory testing.
51. The Ministry of Health is working with the Institute of Environmental Science and Research (ESR) to explore opportunities to further enhance surveillance for avian influenza and to consider avenues for improvement. HPAI is currently a notifiable disease in New Zealand. As such any case must be reported to the local Medical Officer of Health at the National Public Health Service. ESR coordinates surveillance for this.
52. Surveillance to be initiated in the event of a HPAI incursion in New Zealand is outlined in the section that follows around our response approach.

Legal framework

53. MPI is considering the legislative tools to use to manage HPAI. The primary piece of legislation for response will be the Biosecurity Act 1993, in conjunction with the Animal Products Act 1999 and the Food Act 1999 as necessary to manage any risks associated with consuming animal products.
54. There are a range of powers under the Biosecurity Act that can be used to manage HPAI. Where the use of these powers directly results in a person experiencing losses, this is likely to entitle the person to compensation under the Act.
55. MPI is considering if there are tools under the Biosecurity Act that would enable effective management of an incursion in poultry operations ^{9(2)(g)(i)} [REDACTED]. This is appropriate, given that establishment in wildlife has been a hallmark of incursions overseas.

HPAI response components

56. While some wild birds arrive in New Zealand year-round, the next high-risk window for the arrival of HPAI is believed to begin in September when migratory birds return from the northern hemisphere. The risk continues throughout Spring/Summer. Over the coming months, we will continue to work with our One Health Partners and the industry to finalise those planning and preparedness aspects that need to be resolved and/or enhanced.

57. We aim to rapidly detect an incursion into New Zealand, contain further spread where possible and implement effective disease control operations. The plan includes:
- a) surveillance – maintaining (and expanding as needed) surveillance to be able to detect any arrival of HPAI in New Zealand (including offshore sub-Antarctic Islands, and also in the Ross Sea area of Antarctica) quickly; and surveillance that will be activated in the event of an incursion to find additional infected places;
 - b) industry - work will continue with industry to move toward better biosecurity practices at the farm and shed level. These practices that prevent contact between wild birds and poultry can help prevent farms from becoming infected. This includes options for free-range farms (such as housing to limit contact between commercial and wild birds);
 - c) trade and market access work will continue (to implement compartment approach^{6(a)});
 - d) if HPAI is detected in commercial poultry, we will enhance surveillance in other commercial poultry and restrict movements off infected and suspect properties. Such a finding will also require increased surveillance in wild birds around the locality of the infected place. Infected places will require depopulation, with disposal of culled chickens and other infectious material like chicken litter - operational planning for these activities is underway. Although the government's role in depopulation and disposal (especially over the medium-to long-term) is to be determined, this is an activity that must be completed to prevent further spread and limit spill over events;
 - e) our plans do not include emergency vaccination of poultry. However, should industry wish to vaccinate commercial flocks over the longer term, MPI will assist with the approval process as well as ensuring that vaccination plans take account of the level of surveillance required in vaccinated flocks to ensure that the vaccine has adequate coverage of the circulating strain; and
 - f) wildlife - if HPAI is detected in wild birds, we will initiate additional surveillance in wild birds and commercial poultry (as above). The DOC vaccination trial on captive endangered species is well underway, and the plan and approach to manage these wild birds and vaccinate additional captive populations in the event of an incursion is to be finalised by DOC. No movement controls or depopulation would be implemented for wild birds. Disposal options for large-scale mortalities of wildlife are yet to be worked through.
 - g) Public health – MOH is developing its plans for public health messaging and managing the risks for people that could be exposed to HPAI through contact with dead or sick animals.
58. MPI has a draft operational plan to describe procedures for farm-level response actions (including movement controls, destruction, disposal, cleaning and disinfection). This plan will be used in an MPI-led response, but the operational procedures could also be used by industry operators to manage activities around disposal and cleaning themselves.
59. The sections that follow describe in more detail the procedures and planning supporting each of these components.

60. If MPI were required to mount an operational response to an incursion of HPAI, we would use the service delivery capabilities of biosecurity panel providers to respond (MPI has an existing procurement panel of providers in place to support responses).

Response surveillance and tracing

61. Following initial detection, surveillance aims to rapidly detect all cases of HPAI in poultry, to understand the extent of HPAI spread in poultry and wildlife.
62. The aim of tracing following the initial HPAI detection is to backwards and forwards trace the index case (that is, the first identified case) to determine the source of infection and to identify where the disease may have spread to. This allows further spread to be curtailed by identifying possibly infected locations and stopping those from moving risk goods or animals any further. This activity stops the network of infected places from growing.
63. Tracing allows the impact on the poultry sector to be reduced by following up potential disease spread events caused by human activities. Understanding the network of disease spread provides information that supports the maintenance of supply of poultry and products to both the domestic and overseas markets, where possible.
64. Surveillance planning for a response is in place and tracing plans are being developed.

Movement control

65. The objective of movement controls is to prevent the spread of HPAI through controlling the movement of commercial poultry species and associated risk goods that can be prevented from moving. Ongoing movement controls are an important measure for those countries where the large scale of poultry production and/or exports makes national control programmes economically justifiable. Movement controls will not be implemented in free-living (wild avian) populations as this is infeasible based on international experience. The use of wildlife risk zones has proved successful for communicating with poultry owners.
66. Details of any imposed movement controls will be circulated through different media and social media channels supported by a clear communication plan. International counterparts have used movement control zones of various sizes depending on the characteristics of a geographic region, local wild bird populations, and the density of poultry premises in the region.
67. Our operational plan proposes different zones to be placed around infected properties, in line with overseas experience and planning. The UK implements a three-kilometre zone around an infected place with a ten-kilometre surveillance zone surrounding that. The New Zealand approach to movement control zones for commercial poultry is being worked on including financial and operational considerations. In the event of a detection in wildlife, we will implement a wildlife risk zone that will help to communicate to poultry owners in the vicinity that they need to implement greater focus on biosecurity at the farm level to prevent contact with wild birds.

Depopulation

68. The objective of depopulation is to reduce disease spread while ensuring animals are killed humanely, as required by section 12 of the Animal Welfare Act. The process should aim to be completed within 48 hours of notification of the infection.
69. The methods used to depopulate domestic and commercial poultry bird populations will be dependent on type of farming system, availability of resources, social license, human safety, and cost.
70. Inhalation of CO₂ gas is recognised as the most feasible, acceptable and effective depopulation method for large numbers of birds. Other methods such as foaming, and mechanical methods could be considered at smaller scale. Ventilation shutdown is not recommended for animal welfare reasons but could be considered in an emergency.

Disposal

71. The objective is that disposal of infected carcasses, litter, materials, and equipment is conducted in a biosecure manner as quickly as possible after depopulation operations are completed, to reduce any further spread of the virus. Disposal operations are conducted by trained individuals following all biosecurity, health and safety, environmental, and hygiene protocols.
72. Disposal can be either on or off the Infected Place. The method will be determined by risk assessment, considering factors such as the availability of an appropriate on-site location that meets the criteria for biosecure disposal, proximity to an appropriate off-site disposal location, and the risk of spread through transportation. Any impact on businesses and the wider community must also be considered.
73. The most likely on-site disposal methods include composting and deep burial. If on-site disposal is deemed not suitable or practical then off-site disposal methods could be used including deep burial at a landfill facility, rendering, or mass disposal at a centralised site by deep burial, incineration, or composting.
74. The poultry industry has some existing ability and technical expertise to manage disposal within their industry with oversight, support, and guidance from MPI. Other sectors have existing disposal capability through service providers engaged to carry out business-as-usual disposal operations. These existing relationships could be utilised with oversight, support, and guidance to strengthen biosecurity from MPI.
75. Our planning on this has drawn from the operational plan developed for Foot and Mouth Disease (FMD), which has explored options and processes around deep burial, composting and biosecure transport if offsite disposal is needed.
76. Disposal in the wildlife sector may require One Health partners to ensure logistics and equipment are available if required. This needs to involve local and regional councils and is being worked on.

Decontamination

77. Decontamination is designed to reduce the virus load below infective levels and applies post-depopulation, which requires a combination of cleaning, disinfection and a stand-down period. This is applicable across the commercial poultry sector, backyard poultry and zoos/wildlife parks.
78. There is a cleaning and disinfection process as part of the normal commercial industry production cycles. This varies between the different companies and production sites. Some companies have processes that would provide effective decontamination for this virus, particularly the export sector breeder facilities and hatcheries. A detailed cleaning process would be limited in smaller and backyard style production sites.
79. After decontamination is completed, a minimum of a 28-day stand-down period must occur before restocking. If decontamination/disinfection cannot be performed effectively to a level of assurance, then place-based stand-down periods and fallowing are the only possible options. These standdown periods could have significant impacts on the industry, as these can range for periods of 120 days (or more).
80. MPI's operational planning for cleaning and disinfection is based on our detailed planning in place for other contagious viral pathogens such as FMD and will include removal of all organic material and application of appropriate agents to kill the virus.
81. It is not practical to undertake decontamination of the environment for wildlife outbreaks. Wildlife hospitals and conservation facilities can incorporate decontamination into their preparedness and contingency plans with the appropriate guidance and standards.

Vaccination

82. Emergency vaccination of poultry is not recommended as part of New Zealand's approach to an incursion of the currently circulating strain of HPAI. While vaccination may play a future role in industry adaption² to living with H5N1 establishing in New Zealand wildlife, the use of vaccination in commercial poultry has significant operational consequences. These include high levels of surveillance to monitor circulating strains of disease and the need to update vaccines to ensure adequate suppression of spread.

Communications and stakeholder engagement

83. Communications material is being produced between One Health agencies, to ensure consistency of messaging. Material is also being produced for specific stakeholder groups that may be at risk (for example; duck hunters, those engaging in cultural muttonbird harvest).

² Internationally, vaccination is regarded as providing limited benefit for meat chickens due to their short lifespan (typically around six weeks), but is of increasing interest for layer hens, which often produce for over two years.

84. Regular meetings between MPI officials and industry have been occurring, both at the senior and technical level. This includes regular engagement with the industry bodies such as the Poultry Industry Association of New Zealand (PIANZ), the Egg Producers Federation (EPF), and New Zealand Feed Manufacturers Association (NZFMA). These meetings are being utilised to explore if industry resilience and biosecurity preparedness is sufficient for any potential incursions.
85. MPI has also been engaging with the livestock industry, Fish and Game, and other groups/organisations as appropriate.
86. A High-Level Advisory Group composed of a recognisable and well-regarded international expert from each of the three One Health domains has been formed. They have been convened to get their advice about response approaches and their input about international developments. We would expect this group to be of significant value to senior decision-makers in the event of an incursion.

One Health partner activities

Department of Conservation

87. Vaccination can be used to reduce susceptibility to infection. In addition, should a vaccinated animal become infected, clinical signs and shedding of the virus are reduced.
88. DOC, supported by MPI, is carrying out a vaccine safety and efficacy trial on five endangered captive wild bird species (ten individuals of each species, 50 birds in total). The vaccine used by DOC is one of the two vaccines registered by MPI for use in New Zealand and held in a DOC-maintained vaccine bank.
89. The trial began in late January 2024, and all birds have received both of the required vaccination doses. The species in the trial are takahē, red-crowned kākāriki (as a proxy for kākāriki karaka), tūturuatu, kakī and kākāpō. No adverse events have been observed in any birds. Preliminary results from the vaccine efficacy testing are promising, indicating takahē and tūturuatu are producing antibodies for HPAI. Further results are expected over the next few months.
90. There are currently no plans to allow use of vaccination for any other wild birds at this stage, outside of specific New Zealand taonga species where other protective measures are unavailable and the potential impact of the loss of individuals to conservation programmes is severe. Capturing and vaccinating free-living birds is unlikely to be viable on anything other than a very small scale. DOC is working on a plan beyond the trial as to their approach for protecting these highly endangered captive species.
91. DOC preparedness for HPAI is focused on making sure Districts are ready to respond to outbreaks and supporting engagement with mana whenua and impacted stakeholders (for instance, councils, volunteer groups, DOC permitted operators).

Ministry of Health / Health New Zealand

92. The operational response (including rapid detection and containment) to a human outbreak of H5N1 avian influenza will be managed by the National Public Health Service in Health New Zealand. The *New Zealand Influenza Pandemic Plan* and the *Communicable Disease Manual* contains the Government's plans for this scenario and are both being updated in light of the risk of an avian influenza outbreak.
93. A joint MOH and Health NZ Incursion Response Plan is being drafted. This plan aims to:
- outline the strategic and operational response to HPAI arriving in New Zealand in animals, with the aim of managing risks to humans;
 - inform the health contribution to interagency response; and
 - manage information needs from the public, media, and stakeholder organisations, particularly those that employ workers who may be at increased risk.
94. The Ministry of Health and Health New Zealand, with input from WorkSafe, are proactively developing more detailed advice for the public to minimise exposure and risk of infection, especially for people undertaking specific occupational risk activities to be communicated as the risk profile changes.
95. MOH is closely monitoring the literature on genetic and antigenic changes in A(H5N1) and its various genotypes, particularly from human cases.

Next steps

96. Officials would value the opportunity to speak further with you regarding this briefing to clarify next steps and any questions you might have.
97. We will continue to provide you with regular updates on the progress with our planning, and the various components of this as outlined in this briefing.

Recommendations

98. It is recommended that you:

- a) **Note** that MPI will continue to provide regular updates on the progress with our planning, and the various components of this as outlined in this briefing.

NOTED

- b) **Note** that a paper for you to take to Cabinet will be prepared, outlining decisions that can be made in advance of an incursion.

NOTED

- c) **Agree** to forward this Briefing to the Minister of Health, Minister of Conservation, Minister for Trade and Minister for Hunting and Fishing

YES / NO

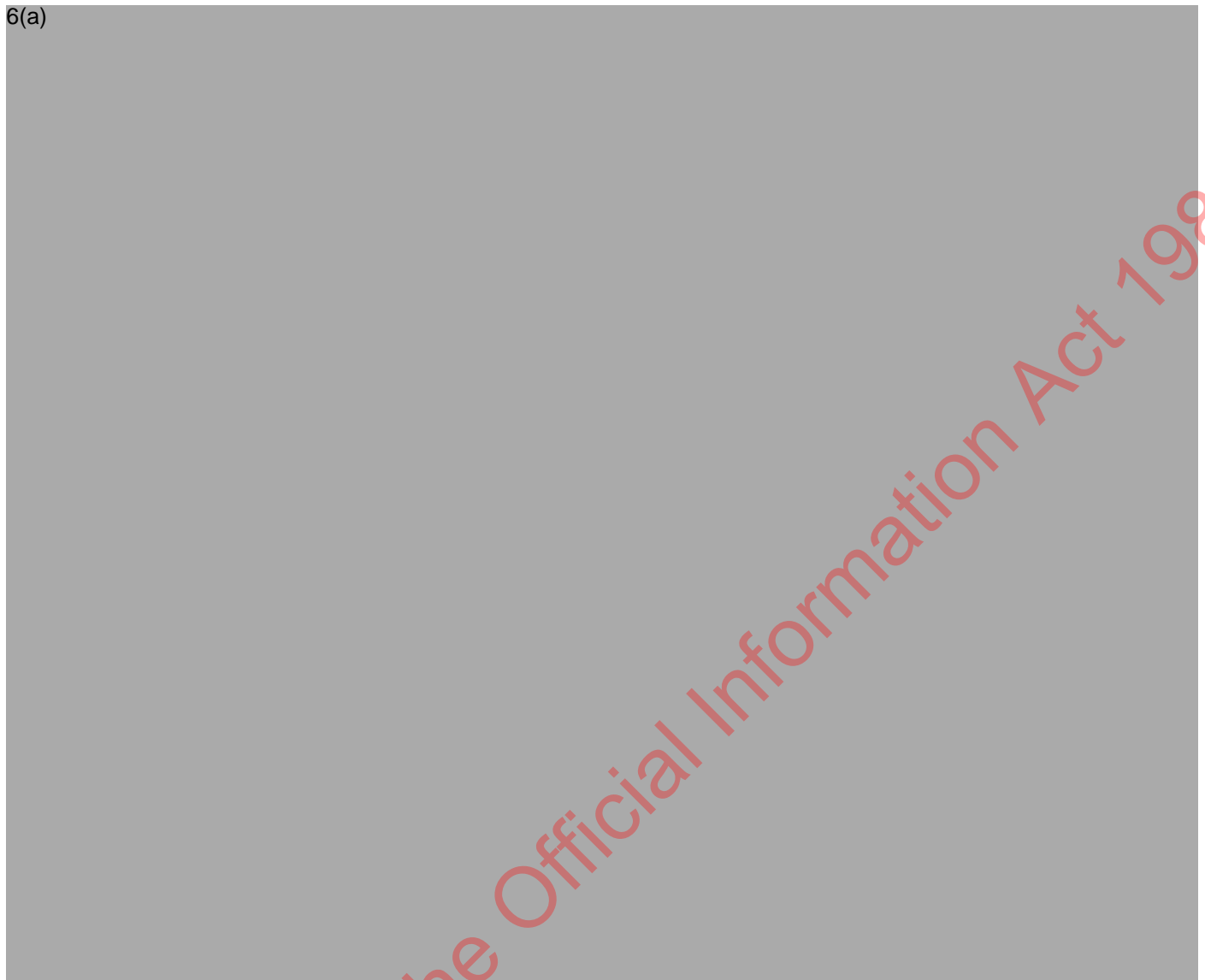


Stuart Anderson
Deputy Director-General
Biosecurity New Zealand

Hon Andrew Hoggard
Minister for Biosecurity

/ / 2024

6(a)



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To: Hon Andrew Hoggard, Minister for Biosecurity

From: Peter Thomson, Chief Biosecurity Officer

HPAI Talking Points – Meeting with Poultry Industry Representatives

Date	24 May 2024	Reference	AM24-0479
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Purpose

- On Monday 27 May (10:00am to 10:30am), you have a meeting scheduled with representatives of the New Zealand poultry industry. The representatives are listed below, and brief biographies are attached in **Appendix One**.
- The purpose of the meeting is to discuss High Pathogenicity Avian Influenza (HPAI), and what preparations can be made in advance of the disease reaching New Zealand.
- The Ministry for Primary Industries (MPI) would like to emphasise that, unlike many other incursions, HPAI is likely to establish in the wild bird population and will therefore represent an ongoing threat to the commercial poultry sector.

- 9(2)(g)(i) [Redacted]

- 9(2)(a) [Redacted]

HPAI background

1. In 2024, you received an aide memoire covering industry issues for an initial meeting with poultry industry leaders (*AM24-0041 Meeting with Poultry Industry Association New Zealand, Egg Producers Federation New Zealand and New Zealand Feed Manufacturers* in January) and two briefings about HPAI (*B24-0014 High Pathogenicity Avian Influenza* in April and *B24-0348 Preparing for High Pathogenicity Avian Influenza* in May).
2. This aide memoire will briefly recount key points but will not attempt to repeat this background material in detail.
3. Avian influenza or 'bird flu' refers to a disease caused by influenza Type A viruses. These spread naturally among wild birds, particularly waterfowl, and can infect a wide range of bird species, and sometimes cross over into infecting mammals.
4. A strain of HPAI has emerged and spread across the northern hemisphere and the Americas. This strain has now reached the Antarctic Peninsula.
5. Unlike many biosecurity threats, HPAI is not expected to be brought to New Zealand by human activity, but rather by wild birds. For this reason, it is not likely that it can be kept out of New Zealand in the long term, or eradicated if it establishes in the wild bird population.
6. This strain of HPAI has potentially significant impacts on the poultry sector, wildlife and biodiversity, and public health. MPI, the Department of Conservation (DOC) and the Ministry of Health (MOH) are working together in a 'One Health' approach to develop response options to protect our native species, mitigate the impact on the poultry sector and protect human health.
7. This paper will focus on impacts on the poultry sector, and how MPI and the sector can prepare for a HPAI incursion.

Recent Australian developments

8. In May 2024 avian influenza was detected at a poultry farm in Victoria, Australia. Preliminary testing showed it was not the same strain as the one currently spreading worldwide, and is likely to have emerged as a local mutation from a Low Pathogenicity Avian Influenza (LPAI) strain. MPI is engaging with Australian counterparts to follow the progress of their investigation.
9. The Department of Health Victoria recently advised of a human case of HPAI (H5N1). A young child who had recently returned from India tested positive for HPAI in early March 2024 – this infection was acquired outside of Australia and MOH considers it does not change the overall risk to humans in New Zealand, which remains low.

Significance of poultry industry

10. Figures from 2022 show that New Zealand produced around 120 million chickens from 151 farms, largely for the domestic market. The value of the chicken meat industry to New Zealand in 2022 was roughly \$1.8 billion, with international trade accounting for only a small percentage of this figure.
11. Chicken is New Zealand's most widely consumed meat at an average of just over 40kg per person per year. It is roughly equivalent to the combined per capita consumption of beef, lamb, and pork, and is particularly heavily consumed in low-income households. An increase in chicken prices would therefore have an impact on the cost of living.
12. In 2022, there were around 130 commercial egg farms, producing over 90 million dozen eggs¹ per year. In late 2022, industry reported \$286 million in annual retail sales of eggs, with production types being approximately one third each for colony cages, barn-laid and free-range. This change towards free-range has been driven by changes in consumer and supermarket expectations as well as the updated regulations. The regulations were introduced in 2012 through a Code of Welfare (Layer Hens), which required a decade-long phase out of battery cages for all layer hens with full prohibition by 2022.
13. Free range producers who do not have the capacity to house all their birds inside are the industry group at highest risk from HPAI, as it is extremely difficult to protect their flocks from contact with wild birds or their faeces.
14. The total value of poultry meat and meat products, and egg and egg product, exported from New Zealand in 2022 was \$138.4 million. In 2024, this is expected to be approximately \$175 million. Poultry meat and meat products contribute approximately 46 percent of the value of poultry exports, with the export of genetic material in the form of fertile eggs or day-old chickens contributing around 42 percent. Eggs and egg products make up approximately 12 percent of the value of exports.
15. In 2023, New Zealand exported 3.2 million day-old chicks and 6.2 million fertile/hatching eggs. This market has developed because of the high health status of New Zealand poultry. Primary markets are South East Asia (including Indonesia, Philippines, Malaysia, Thailand, and China) and the Pacific (Solomon Islands, Fiji, French Polynesia). These markets are particularly sensitive to the health status of New Zealand poultry.

Government-Industry Agreements (GIA)

16. The Poultry Industry Association of New Zealand (PIANZ) were approved on 11 April 2023 to represent the poultry meat sector (commercial processing of chicken, turkey, duck, quail, and geese) of New Zealand under the Government Industry Agreement (GIA) for the purposes of Part 5A of the Biosecurity Act 1993 (the Act). This was confirmed on 21 June 2023 when PIANZ signed the GIA deed in the Minister for Biosecurity's office.

¹ Egg industry production statistics are normally reported in dozens – 90 million dozen comes to around a billion eggs.

17. The GIA Deed outlines the principles for the partnership and the commitments that each signatory makes to engage in the wider biosecurity system. This includes co-investment to improve the collective biosecurity capacity and capability of industry and government in readiness and response.
18. The layer hen industry, represented by the Egg Producers Federation of New Zealand (EPF), is yet to sign the GIA at this time.

Preparedness activities

19. MPI and partner agencies DOC and MOH have multiple workstreams aimed at improving New Zealand's preparedness for an HPAI incursion. These include:
 - a) DOC staff visiting the sub-Antarctic islands and Antarctic New Zealand staff at Scott Base have been issued sampling kits and given training in their use;
 - b) surveillance of migratory birds and shorebirds not displaying clinical signs of HPAI is underway via a contract between MPI and Dunedin Wildlife Hospital;
 - c) Dunedin and other wildlife hospitals will continue to report birds with suspected avian influenza symptoms via the 0800 number;
 - d) study underway of the ecology and evolution of Low Pathogenicity Avian Influenza viruses (LPAI) viruses circulating in New Zealand, run by MPI's Animal Health Laboratory, in conjunction with Fish and Game New Zealand;
 - e) additional awareness material provided to practicing veterinarians;
 - f) an app for recording information on suspect cases currently undergoing field trials; and
 - g) a webpage with HPAI information has 'gone live' on the MPI website², and some of this material will be printed in leaflet form for distribution to the appropriate target audiences.
20. DOC has a vaccine trial underway on five endangered native bird species, and is focused on making sure districts are ready to respond to outbreaks and supporting engagement with mana whenua and impacted stakeholders (for example, councils, volunteer groups, DOC-permitted operators).
21. MOH is updating the New Zealand Influenza Pandemic Plan and the Communicable Disease Manual containing the Government's plans in light of the risk of an avian influenza outbreak.
22. MOH and Health New Zealand, with input from WorkSafe, are developing detailed advice for the public to minimise exposure and risk of infection, especially for people undertaking specific occupational risk activities.

² <https://www.mpi.govt.nz/biosecurity/pests-and-diseases-not-in-new-zealand/animal-diseases-not-in-nz/high-pathogenicity-avian-influenza-and-the-risk-to-nz/>

Risk factors for infection

23. An American industry publication³ outlined a list of risk factors that is likely to be broadly applicable to New Zealand if HPAI becomes established in wild birds:
- a) longer lived poultry are at higher risk, including breeders, turkeys and table-egg laying chickens. Short-lived meat chickens are at lower risk;
 - b) farms with more poultry houses are at higher risk of virus introduction. The larger the farm area, the greater the chance wild birds will deposit virus on the farm;
 - c) farms with more birds per house are at higher risk due to increased entry frequency of personnel and equipment.
 - d) poultry requiring personnel and equipment to enter houses more frequently are at higher risk. More trips (for example, harvesting birds in multiple 'cuts') in and out of the house means more risk of HPAI introduction.
 - e) poultry exposed to natural ventilation (the highest risk) or high-velocity ventilation systems are at higher risk. Unscreened inlets and entrances increase potential exposure.
 - f) farms with high labour requirements are at higher risk due to the increased risk of personnel turnover. This requires increased attention to training and the designing of biosecurity procedures to be as foolproof as possible.
 - g) farms attracting feral birds are at higher risk, including those in migratory flyways, near standing water, with attractive nesting and resting sites or other attractants.
 - h) turkeys are at higher risk since a lower dose of virus is required to infect them.

Additional biosecurity precautions

24. A range of biosecurity precautions can be imposed, mirroring the risk factors above. These include the following:
- a) identifying which facilities are at highest risk, and planning biosecurity measures accordingly.
 - b) reducing the need for people and equipment to enter houses by utilizing remote monitoring, automated equipment and robotics as much as possible;
 - c) using foot baths and changes-of-clothing when moving between sheds;
 - d) designing farms and houses to eliminate feral bird and animal attractants and maintain them properly;
 - e) keeping feed and water free of contamination from wild birds;
 - f) designing ventilation systems to accommodate biofilters and reducing aerosol dispersion;
 - g) regular washing and disinfection of hard surfaces in each shed;
 - h) providing adequate training and supervision for managers and staff so they fully understand biosecurity measures and the need to implement them;
 - i) designing or modifying houses to create entrances for only clean personnel and equipment, and exits for potentially contaminated personnel and equipment, to reduce the potential for cross contamination and the chances of operational biosecurity errors; and

³ Gondor, E. *Rethinking Poultry Farm Biosecurity in Response to HPAI*. WattPoultry, Feb 2023.

j) adoption of 'all-in; all-out' production processes whereby all birds in a shed are sent for slaughter simultaneously, which minimises staff and equipment movement in and out of a shed and allows the shed to be cleaned and disinfected prior to introduction of new chicks. This is a significant departure from standard New Zealand commercial practice.

25. These measures all come with some degree of cost attached. These may be direct costs of additional equipment, increased workload on staff or, in the case of para 24 j), impacts on utilisation of processing equipment and product flow onto the market.

26. 9(2)(g)(i)

[Redacted]

[Redacted]

[Redacted]

Market access issues

29. MPI is not aware of any market access issues that have come about as a result of the endangered bird vaccination trial DOC is carrying out. ^{6(a)}

[Redacted]

The species that are being vaccinated in this trial are among the worlds' rarest birds and are in lifetime containment. They are being vaccinated with an inactivated vaccine that contains no live microorganisms and cannot cause disease. There is no prospect of the vaccinated birds ever coming into contact with poultry, and no ability for any HPAI to result even if such contact did occur.

30. There are trade implications if any form of Avian Influenza is detected in a New Zealand poultry flock. A number of our export health certificates claim that New Zealand is free of HPAI and/or Avian Influenza. ^{6(a)}

[Redacted]

31. 6(a)

[Redacted]

32. New Zealand's current HPAI freedom status for certifying export of poultry and poultry products is based on historical HPAI freedom – New Zealand has never experienced a case of HPAI. This status will be lost when we confirm a first case of HPAI.

33. MPI has been asked if exports could continue from the North Island if a detection was made in the South Island, or vice versa. Our current export certification is based on an absence of HPAI from all of New Zealand and do not contain zoning provisions, so exports could not continue without certificates being renegotiated with importing countries.

34. 6(a)

[Redacted]

35. If New Zealand loses its historic freedom status and wishes to maintain exports other than via the compartments described above, it will have to achieve freedom in accordance with the relevant World Organisation for Animal Health (WOAH) code chapter. This applies only to commercial poultry, so finding HPAI cases in wild birds or backyard poultry is not disqualifying. However, it is necessary (along with other WOAHP-mandated requirements such as ongoing LPAI surveillance and encouraging the reporting of suspected HPAI cases) to prevent any outbreaks of HPAI in commercial flocks for a 12-month period. 6(a)

[Redacted]

[Redacted]

37. MPI has been working closely with industry to develop options for voluntary biosecurity 'compartments', defined by WOAHP as sub-populations with a distinct biosecurity status maintained by management practices or geographic exclusion. Consultation on a proposed Compartment Notice for hatching eggs and day-old chicks closed in April 2024. MPI is on track to issue the Notice by 1 July 2024. The Notice when issued may allow some continuation of exports without requiring a return to country disease freedom as articulated in the WOAHP HPAI disease specific chapter. The major exporters of day-old chicks and hatching eggs are the most likely users of this scheme.

38. Importing countries will need to agree that compartments can be used to safely conduct trade,^{6(a)}



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Appendix One: Industry Participants

9(2)(a)



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To: Hon Andrew Hoggard, Minister for Biosecurity
From: Julie Collins, Deputy Director-General Policy & Trade

Biosecurity Portfolio Priorities

Date	11 June 2024	Reference	AM24-0528
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Purpose

- This aide-memoire provides you with information about Biosecurity portfolio priorities for discussion.

Biosecurity Portfolio Priorities

Out of scope

- Attached as **Appendix One** is an A3 that outlines Biosecurity portfolio priorities. These include your agreed priorities and other areas critical to achieving better biosecurity outcomes for New Zealand.

Out of scope

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Out of scope

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Highly Pathogenic Avian Influenza

Ensuring NZ is prepared for an HPAI incursion through a One Health response approach (MPI, DOC, MOH), partnered alongside industry. We are seeking a Cabinet decision on our strategic response in July 2024. This will guide operational planning and supporting Industry with Business Continuity planning and resilience. Led by Biosecurity NZ

Out of scope



To: Hon Andrew Hoggard, Minister for Biosecurity
From: Stuart Anderson, Deputy Director-General Biosecurity New Zealand

Update on Highly Pathogenic Avian Influenza

Date	4 July 2024	Reference	AM24-0655
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Purpose

- This aide-memoire provides an update on Highly Pathogenic Avian Influenza (HPAI) in Australia, avian influenza surveillance in New Zealand and environmental persistence of avian influenza.

Australia Update

- On 19 June 2024, a poultry farm in the Hawkesbury region in New South Wales (NSW) was confirmed positive with HPAI, strain H7N8. A second poultry property was confirmed with the same strain on 22 June, about 1.5 kilometres away from the initial infected property.
- On 27 June 2024, a poultry farm in Canberra was confirmed with the H7N8 strain. The route of transmission has been linked to movement of eggs and associated materials from one of the infected properties in NSW. With confirmation of an H7 strain in Canberra, Australia is still free from the H5N1 highly pathogenic strain of concern.
- This brings the total number of infected farms in Australia to 11, with eight cases in Victoria (H7N3 and H7N9), two cases in NSW (H7N8), and one case in Canberra (H7N8). Reports from Australia indicate these detections relate to three separate spillover events. Restricted areas have been placed around all sites, and depopulation, cleaning and disinfection of all sites is underway.
- While it isn't clear exactly why Australia has experienced these isolated outbreaks of HPAI, research indicates that climate may be a factor in Australia's outbreaks. Australia is more prone to big flooding events that cause a large expansion of waterfowl numbers that are naïve to disease, leading to circulation of viruses, followed by extended dry periods that cause wild birds to interact more with poultry in an attempt to find food and water.

5. Experts have advised that differences in New Zealand's climate, along with a smaller poultry population, and greater geographic isolation with fewer birds arriving from places with high rates of Low Pathogenic Avian Influenza (LPAI) circulation, means that fewer transmission events of all types occur here.
6. The Ministry for Primary Industries (MPI) is in contact with our counterparts in Australia, including the Chief Veterinary Officer of Australia, to ensure we capture any lessons learnt during their response to the outbreaks. Arrangements are underway to send MPI officials across to Australia to understand the eradication efforts first-hand.

New Zealand Surveillance of Avian Influenza

7. Since 2004, MPI's Animal Health Laboratory (AHL), in conjunction with the Department of Conservation (DOC) and Fish & Game New Zealand, has annually carried out surveillance targeting non-migratory waterfowl and migratory birds over summer months. The initial focus was testing migratory birds, however results indicated that migratory birds posed a very low risk for avian influenza, so the focus has shifted to resident waterfowl since 2010. These animals are known to be in very close proximity to migratory birds at mingling sites and are competent hosts of LPAI.
8. Results show that the same strain of LPAI that has been present for the past 20 years continues to be detected in mallard ducks, which is closely related to some of the historic United States strains of LPAI. It appears to have been around since the 1970s and is relatively stable — there are no mutations of concern.
9. In mallard ducks, the LPAI prevalence in New Zealand is highly variable depending on the year, location, and time of year.
10. For the 2024 summer season, AHL has completed the avian influenza PCR screening for the annual survey of mallard ducks in New Zealand. Four locations were visited – Parakai Springs, Paeroa, Kaituna, and Te Awamutu. 2,560 samples were collected, from 1,280 mallard ducks. These were tested for the presence of avian influenza virus. A total of 997 samples from 632 mallards tested positive for avian influenza. All positive samples were tested using H5- and H7-specific avian influenza PCR, with no positive results, meaning that all detected positives are LPAI.

Environmental Persistence

11. Research shows persistence of avian influenza in the environment is varied, and depends on the strain studied. Environmental contamination of HPAI in large bird colonies is high, such as nesting seabirds or waterfowl. This is due to bird faeces containing large amount of infectious virus. In freezing conditions (-20 degrees Celsius), it can last up to 12 months, with the ability to survive repeated freeze-thaw cycles.
12. In fresh and salt water, HPAI has been shown to survive for months in cool temperatures. However, survival of the virus varies across different temperatures, pH, and other environmental conditions; such as rainfall and numbers of birds present to shed virus.

13. HPAI virus can be viable in liquid bird faeces for 30 to 35 days at 4 degrees Celsius and for 7 days at 20 degrees Celsius. HPAI has also been shown to survive in infected feathers for long periods of time, especially at low temperatures (160 days at four degrees Celsius). These factors will need to be considered when disposing of HPAI infected poultry litter and carcasses during depopulation, cleaning and disinfection processes.
14. In discussion with our UK counterparts, they noted that the majority of infected properties were within 100 metres of a large body of water (not small ponds), such as gravel pits and irrigation ponds. This was thought to be due to large congregations of waterfowl present.

Upcoming Engagements

15. Chief Executives of MPI, DOC and the Ministry of Health met on 3 July to discuss progress on HPAI preparedness across One Health Agencies.
16. The Industry Chairs group meets on 5 July, and this will be a monthly meeting between ^{9(2)(a)} [REDACTED] and senior MPI Officials (chaired by the Director-General) to discuss preparedness and sector-specific concerns regarding HPAI.
17. Planning is continuing on study tours to both Australia and the United Kingdom to learn from first-hand experiences of managing HPAI outbreaks.
18. The second monthly HPAI Newsletter is being sent out this week to stakeholders across the poultry and cattle industries of New Zealand, and will also be sent to stakeholders in the broader animal health community. Media interviews continue as the need arises.

Minister / Minister's Office

Seen / Referred

/ / 2024



To: Hon Andrew Hoggard, Minister for Biosecurity
From: Stuart Anderson, Deputy Director-General Biosecurity New Zealand

Update on Highly Pathogenic Avian Influenza

Date	Reference
19 July 2024	AM24-0678

Purpose

- This aide-memoire updates you on work to prepare New Zealand for a Highly Pathogenic Avian Influenza (HPAI) incursion.

Recent International Developments

Australian funding boost for HPAI preparedness

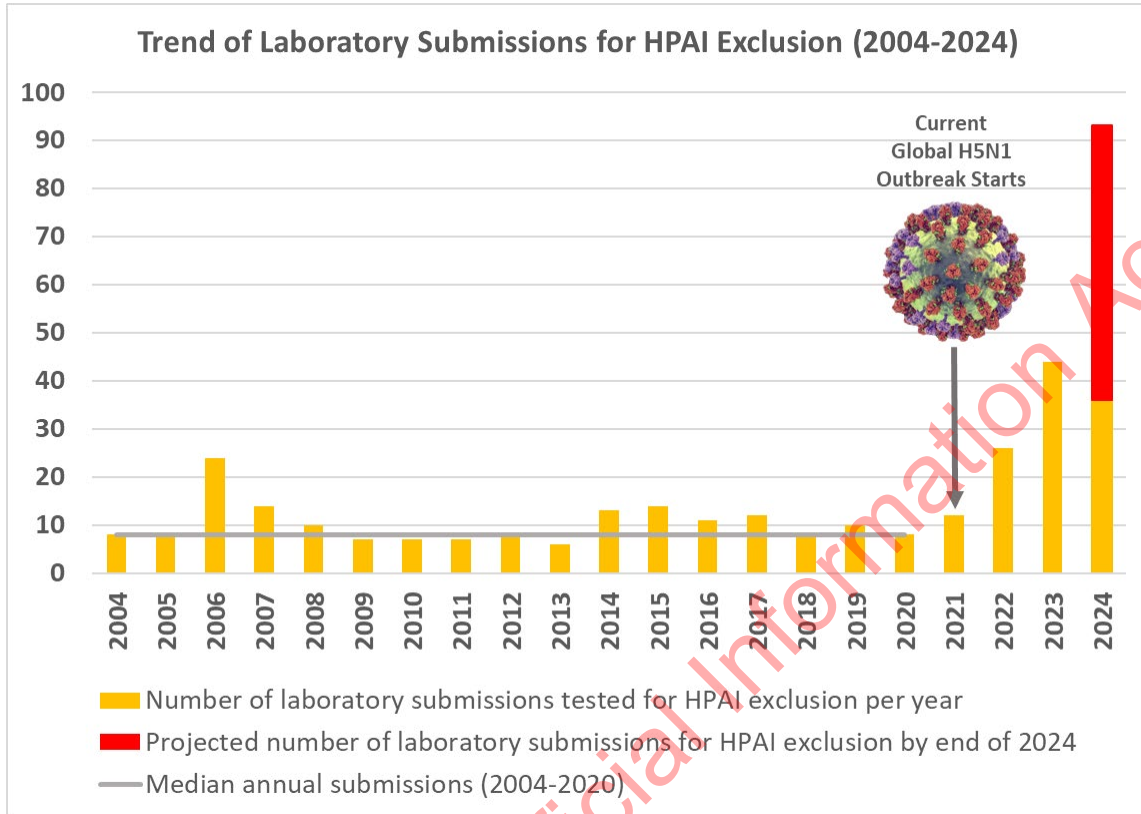
- Australia is currently responding to three outbreaks of HPAI in commercial and domestic poultry. These appear to be locally-derived mutations from H7 low pathogenicity avian influenza viruses.
- On 10 July, the Australian government announced an additional funding boost of AUD\$6.9 million to prepare for H5N1 HPAI, in advance of the spring return of migratory birds to Australia from countries where H5N1 HPAI is present.
- The AUD\$6.9 million includes:
 - \$2.2 million for a Wildlife Health Australia One Health surveillance initiative;
 - \$1.95 million for Animal Health Australia to build response capability, including assessing the potential for avian influenza vaccine use in Australia;
 - \$1.1 million to extend a wild bird surveillance programme for another four years;
 - \$800,000 in communications with stakeholders, industry and the general public;
 - \$500,000 to support early detection and response capability in wildlife;
 - \$200,000 to study the location, structure, biosecurity practices and movements within Australia's commercial poultry sector; and
 - \$70,000 to look at links between H7 avian influenza in wildlife and the current H7 outbreaks in poultry

United States human infections

- Health officials have confirmed four (potentially five) new human cases have become infected with H5N1 HPAI. According to media, they are workers responding to the avian flu outbreak at a commercial egg layer operation, and that workers did not apply PPE in accordance with guidelines.

Public notifications

Rise in public reports and laboratory submissions



5. Since 2021, a global surge in worldwide H5N1 HPAI cases prompted heightened vigilance in New Zealand. MPI's Animal Health Laboratory (AHL) has experienced a doubling in HPAI laboratory submissions each year since 2021. Between 1 January and 31 May 2024, AHL received and tested 36 HPAI laboratory submissions, compared to 17 HPAI submissions during the same period in 2023, and a baseline of eight submissions per year before 2020. This uptick reflects successful engagement channels and heightened awareness among stakeholders and the wider public about the importance of reporting suspect cases to MPI.
6. Sample submissions and public reports via the 0800 Exotic Pest and Disease hotline continue to increase. Many of the reports are of relatively low value, such as reports of individual dead wild birds where there is no epidemiological evidence to suggest the presence of HPAI. We triage and consider each of these reports as to whether testing in the laboratory is required.

Industry preparedness

7. Industry and MPI are working together to provide information to farmers about what a detection of HPAI would mean for them at the farm level. Knowledge about the response will help producers plan for a potential incursion and enable planning for business continuity.
8. MPI is working with industry on a project to support improving resilience and tightening biosecurity on commercial poultry farms. There has been good engagement already

from the industry bodies, and organisations across the broiler, egg, and genetics sectors.

9. Initial engagement with larger companies confirms commercial hatcheries, breeders and exporters of genetic material (hatching eggs and day-old chicks), and producers of broilers generally have a strong focus on biosecurity and are being proactive at improving it.
10. The egg production sector has a larger number of independent operators. A key task for MPI is to improve our understanding of smaller commercial enterprises, particularly those operating as 'free range'. Within this sector, biosecurity practices and awareness of HPAI are highly variable, and many smaller free-range producers are yet to develop concrete plans of how they would reduce their risk of infection if HPAI was detected in New Zealand.

HPAI web portal

11. All HPAI material on the MPI website was refreshed in mid-May 2024. One Health partner agencies, (Department of Conservation, Ministry of Health, Health New Zealand) have information that refers to and cross-references the MPI website, and communications teams remain in regular contact across agencies and industry. The site can be found at: <https://www.mpi.govt.nz/biosecurity/pests-and-diseases-not-in-new-zealand/animal-diseases-not-in-nz/high-pathogenicity-avian-influenza-and-the-risk-to-nz/>
12. The portal provides information targeted to different audiences and areas of concern, such as HPAI in commercial poultry, HPAI in domestic poultry, and protecting native wildlife from HPAI. Some of this material has been printed as factsheets and distributed to specific target audiences.
13. This material is progressively refreshed as new information comes to hand. For example, a section on "Dairy and other livestock" was added in response to the spill-over into dairy herds in the USA.
14. Most recently New Zealand Food Safety (NZFS), added a page on Food Safety and Human Health, to address concerns about consuming poultry, eggs, and dairy products. Avian influenza viruses are sensitive to heat treatment, so cooked food and pasteurised milk products are safe to consume.

Other preparedness activities

15. Planning is underway for visits by MPI and industry personnel to Australia and the UK in August to get first-hand information on how those countries have responded to HPAI. Four MPI staff and eight industry members are expected to travel on the UK study tour.
16. Industry Chief Executives were briefed on 18 June on the status of operational plan development, the range of activities underway, and they discussed plans to involve industry in relevant workshops.

17. Destruction, disposal and cleaning and disinfection options for commercial poultry are currently being prioritised in operational planning through shared activities with industry.
18. Progress is being made on a joint Cabinet paper between the Ministers for Health, Conservation and Biosecurity. Agencies are currently in the final stages of drafting, with expected delivery to Ministers in August 2024.

Minister / Minister's Office

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/ / 2024

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To: Hon Andrew Hoggard, Minister for Biosecurity
From: Steven Kelly, Manager, Bilateral Relations & Trade

Meeting with Hon Clare Scriven MLC, Minister for Primary Industries and Regional Development, Government of South Australia

Date	24 July 2024	Reference	AM24-0721
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Purpose

Out of scope

Out of scope

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High pathogenicity avian influenza (HPAI)

14. It is possible that, in the course of your conversation with Minister Scriven, she may want to discuss three recent outbreaks of HPAI in Victoria, New South Wales and the Australian Capital Territory.
15. These outbreaks appear to be locally-derived mutations from H7 low pathogenicity avian influenza viruses. There are restrictions and conditions on the movement of live poultry and fertile eggs into South Australia from these states/territory.
16. The likelihood of any of these Australian strains reaching New Zealand is extremely low, given their lack of ability to disperse via wild birds.
17. To prepare for the possibility of HPAI H5N1 reaching New Zealand from elsewhere in the world, MPI is working closely with the poultry industry to improve sector biosecurity preparedness and response planning. An industry led, government supported, response is considered the most appropriate approach to managing an H5N1 outbreak in poultry. The response objective would be to eliminate the disease from commercial poultry operations as it arises while adapting management practices to reduce the risk of becoming infected.

18. MPI currently have ongoing contact with Australian officials at the Federal level regarding HPAI preparedness and response. MPI officials will be visiting Victoria the week of 29 July to take operational learnings from Australia's response to date.

Minister / Minister's Office

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Appendix Two: Talking Points

Out of scope



High pathogenicity avian influenza (HPAI)

- Understand what early lessons have emerged out of the responses.
- Seek reflections on how prepared for an incursion relevant industries have been.
- Ask about any early indications of the potential and timeframes for recovery.
- Explore any emerging supply chain issues and mitigations.



To: Hon Andrew Hoggard, Minister for Biosecurity
From: Stuart Anderson, Deputy Director-General Biosecurity New Zealand

Highly Pathogenic Avian Influenza Response Preparedness

Date	29 July 2024	Reference	AM24-0728
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Purpose

- This aide-memoire updates you on the current level of Preparedness for a Potential Highly Pathogenic Avian Influenza (HPAI) Response.

Current level of Preparedness for a Potential Highly Pathogenic Avian Influenza (HPAI) Response

- The Ministry for Primary Industries (MPI) is working alongside One Health Partners (the Department of Conservation (DOC), the Ministry of Health, and Health New Zealand) to develop HPAI response options that represent the best approach for New Zealand to protect our unique native species, mitigate the impact on the poultry sector and take preventative measures to protect human health.
- An operational response plan for the poultry sector has been developed which details field-based activities to enable disease control (movement control, surveillance, destruction, disposal, and cleaning and disinfection). This plan is based on previous response planning, industry workshops, and response plans for HPAI from overseas. This plan could be enacted immediately if required. A detailed work schedule is guiding ongoing work to enhance the existing operational response plan, in conjunction with One Health and Industry partners. Our planning documents will be updated with the findings of the upcoming study trips to Australia (Victoria) and the United Kingdom taking place over the next 2 weeks.
- Field services to enact the current plans can be procured rapidly through our panel providers, and we are also working on options for provision of services such as transport and carbon dioxide supply with industry, regional councils, and commercial operators.
- DOC is developing response plans and information for its operational teams around the country in preparation for the arrival of H5N1. It is also currently conducting a HPAI vaccination trial in collaboration with MPI.

5. In the event that the virus mutates to be capable of sustained human-to-human transmission, the New Zealand Health Emergency Plan and the New Zealand Pandemic Plan will be implemented. These documents are undergoing additional refinement, in light of the risk of an avian influenza outbreak.
6. A detailed HPAI response structure has been developed, with named individuals in each role. These people are all Coordinated Incident Management System (CIMS) trained and have experience in previous responses in the functions they have been assigned. In addition, we have other dedicated response staff, CIMS trained individuals and people with response and technical expertise throughout MPI who are identifiable through a response capability register. To further enhance the level of personnel preparedness, HPAI specific training and exercising for MPI staff is currently under development.

Government Industry Agreement

7. We are in preliminary discussions with the Poultry Industry Association of New Zealand (PIANZ) regarding a Poultry Meat Sector Readiness and Response Operational Agreement (OA).^{9(2)(f)(iv)}
[Redacted]
8. The Cabinet paper outlining the proposed strategy and approach to HPAI is being finalised, with cross-agency feedback being collated on the latest draft. We expect to provide you and your Ministerial colleagues (Hon Dr Shane Reti, Minister of Health and Hon Tama Potaka, Minister of Conservation) with the draft paper for Ministerial consultation in August, followed by earliest lodgement possible with the Cabinet Economic Policy (ECO) Committee.^{9(2)(f)(iv)}
[Redacted]
9. The Egg Producers Federation of New Zealand (EPF) have applied to MPI to join the GIA. This application is currently being reviewed, and we will be providing a briefing to you in August with the aim for this process to be completed by September 2024. If this application is successful, the aim will be to include the EPF within the OA being negotiated with PIANZ.
10. ^{9(2)(f)(iv)}
[Redacted]

11. We will continue to keep you updated on our work regarding readiness planning, the various sector agreements under development, and on any developments in the spread and impacts of the disease internationally.

Minister / Minister's Office

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To: Hon Andrew Hoggard, Minister for Biosecurity
From: Stuart Anderson, Deputy Director-General Biosecurity New Zealand

High Pathogenicity Avian Influenza Update

Date	Reference
13 August 2024	AM24-0770

Purpose

- This aide-memoire updates you on work to prepare New Zealand for a H5N1 Highly Pathogenic Avian Influenza (HPAI) incursion. It also provides a summary of the possible implications on free-range producers during an incursion.

International Environment

- The United Kingdom has updated its risk assessment of the H5N1 situation to grade 4: evidence of ongoing mammalian transmission and some non-sustained zoonotic transmission.
- Cambodia has reported a ninth human case from H5N1 HPAI. Two of these cases occurred in late July early August, both of which were hospitalised. All cases had a history of recent exposure to sick or dead poultry, seven cases were children, one case was an adult. There was one fatality.
- The United States of America has not reported any human cases since 25 July 2024. Spread of H5N1 among US dairy cows is continuing, with infection reported in 178 herds (as of 5 August).

Study Tours of Australia and the United Kingdom

- Ministry for Primary Industries (MPI) officials returned from the Australian study tour of the incursion of locally evolved, non-H5N1 HPAI. Agriculture Victoria have deployed around 600 of their staff to their state and regional coordination centres, and the eight infected properties. ^{6(b)(i)} [REDACTED], with an objective to eradicate the HPAI and to return to normal trade.
- The UK study tour was undertaken from 3 to 12 August, including MPI and industry members to observe and learn from the UK's HPAI response.
- We will provide you with a debrief of the main findings from these study tours.


One Health tabletop exercise

7. MPI has been working to organise a series of tabletop exercises in late August and early September 2024. The objectives of the tabletop exercises are to:
 - a) increase awareness of how an MPI-led HPAI response will be executed;
 - b) ensure there is a common understanding across agencies and industry, of the relevant plans;
 - c) define the roles and responsibilities of each agency and industry group involved; and
 - d) identify gaps and additional partners needing to be involved in planning and execution of a response.
8. A One Health exercise is scheduled for 27 August, and will include representatives from Ministry of Health, Department of Conservation, Health New Zealand Te Whatu Ora and local government. Relevant MPI staff from different business units will also be involved to exercise the current HPAI Operational Plan.
9. An MPI exercise will occur in early September with relevant industry partners. Industry representatives are being confirmed by Poultry Industry Association New Zealand (PIANZ) and the Egg Producers Federation (EPF).

Incursion implications for free range producers

10. If HPAI is circulating in wildlife, free range farmers may prevent their birds from going outside to protect them from HPAI. In a meeting on 23 June, PIANZ asked MPI whether free-range producers could continue to advertise their products as free-range if they were kept indoors to protect them from HPAI.
11. The free-range label may not apply if the birds are kept inside for biosecurity purposes, as the Fair Trading Act 1986 disallows businesses from making claims (for example, 'free-range') that cannot be substantiated. The Commerce Commission is the regulator for this act and so MPI has advised PIANZ that this is a commercial discussion between the sector and the Commerce Commission.

12. 9(2)(f)(iv)

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13. 9(2)(h)

A large rectangular area of the document is redacted with a solid grey fill, obscuring the text of item 13.

14. Officials are investigating what impact HPAI may have on the supply of poultry meat and eggs and, if needed, what potential mitigations may be. Overseas experiences have shown few countries have had a shortage of product. In some instances, there has been an increase in cost to consumers, particularly for eggs.
15. There is also evidence that consumer confidence in the safety of poultry products drops during an HPAI outbreak. Messaging to consumers to alleviate a fear-based response is occurring now, to ensure the public that our supply chains will be robust, and poultry products will be safe to consume during an outbreak.

Laboratory readiness

16. MPI's Animal Health Laboratory is focusing on timely investigations for increased surveillance:
 - a) the laboratory is working on the integration of laboratory equipment (PCR machines) with the Laboratory Information Management System (the system) for HPAI, as well as the integration of the field sample collection app with the system. This integration enables automated data transfer, reduces sample processing time, and minimises human transcription errors; and
 - b) the laboratory is using a scenario-based spreadsheet approach to provide the best estimates at the time for sample numbers to enhance laboratory preparedness for HPAI. This is required to determine the necessary stocks of reagents and consumables, ensuring we have adequate supplies on hand (given potential delays in overseas deliveries at the onset of a response). This is also critical to inform the laboratory staff structure.

Next HPAI Update

17. You will receive the next update on HPAI in the week of 26 August.

Minister / Minister's Office

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/ / 2024



To: Hon Andrew Hoggard, Minister for Biosecurity
From: Stuart Anderson, Deputy Director-General Biosecurity

High Pathogenicity Avian Influenza Update

Date	2 September 2024	Reference	AM24-0807
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Purpose

- This aide-memoire updates you on work to prepare New Zealand for a H5N1 Highly Pathogenic Avian Influenza (HPAI) incursion. It also provides a summary of the possible implications on free-range producers during an incursion.

International Environment

California cattle infection

- Three California dairy herds tested positive for HPAI, with clinical signs beginning 23 August to 25 August. It is not yet clear how these herds became infected – if it was from another spillover event or is the same HPAI H5N1 variant that's spread from Texas. No human cases have been confirmed in relation to this event.
- Animal movement is being tracked and evaluated. The affected dairies have been placed under quarantine on the authority of California Department of Public Health's State Veterinarian, and enhanced biosecurity measures are in place. Sick cows are isolated and are being treated at the dairies; and healthy cows have been cleared to continue shipping milk for pasteurization.

Other international HPAI updates

- In Australia, no further cases of HPAI have been detected since 24 June. As a result, housing orders and movement controls are easing.
- In Malaysia, ten human cases of H5N1 bird flu have been recorded so far this year, four since July. One teenage female died. No evidence of human-to-human transmission has been reported in association with any of these cases.
- Europe is starting to see incursions as Autumn approaches. France and Poland both had incursions mid- to late- August, after having none since January and February, respectively.

New Zealand sampling


6. The Department of Conservation (DOC) sequencing analysis results from more than 1500 samples, including from the Subantarctic Islands, showed no high pathogenicity avian influenza. There was one find of low pathogenicity avian influenza on mainland New Zealand.
7. DOC will conduct fieldwork in the sub-Antarctic Islands in October. The team will sample for HPAI, same as what was carried out in 2023.

One Health Preparations

One Health tabletop exercise

8. Exercise Bulwark Quill was successfully conducted on 27 August, bringing together 31 participants from One Health partners as well as representatives from local and regional councils. The exercise was effective in confirming roles and responsibilities in the event of any future HPAI outbreak, and clearly establishing where future readiness effort would be best directed. Six representative scenarios were discussed, and all key response management activities clearly assigned for each.
9. Feedback on the activity has been overwhelmingly positive, and the outcomes will now be used to refine ongoing readiness planning. Future HPAI exercises are intended, with the next one scheduled with Industry this month in mid-September. Industry representatives are being confirmed by the Poultry Industry Association New Zealand (PIANZ) and the Egg Producers Federation (EPF).

Ministry for Primary Industries (MPI) and DOC Joint agency operational readiness workshop

10. The workshop helped to clarify roles and responsibilities between DOC and MPI regarding wildlife impacted by HPAI:
 - a) DOC confirmed that they have responsibility for native birds, and that the protection and management of native birds on DOC land will be their primary focus;
 - b) non-native birds fall outside of DOC's responsibility;
 - c) DOC advised that landowners would be generally expected to address wildlife issues on their land. This includes private and commercial landowners, Council land, other Crown agencies with large land holdings; and
 - d) 9(2)(f)(iv) 
11. Working with local government on their role in a response is a focus.
12. The workshop also outlined next steps for the vaccination plan for native birds. DOC is developing the plan to achieve the best results for New Zealand wildlife. MPI will assess how this plan will impact market access for poultry exports.

One Health Study Tour of the United Kingdom

13. The MPI and industry delegation returned from the United Kingdom on 12 August. The study tour exceeded expectations and industry gained greater insight and appreciation of MPI's preparations, and the role that the industry itself should play in preparations. You will receive a verbal briefing on this on 9 September.
14. Many key learnings are informing changes in readiness and response planning. It was very evident that investing in preparedness now will pay dividends in our ability to withstand an incursion in New Zealand. Key findings included:
 - a) the scale of the initial outbreak is potentially very large, and it may have significant impact on the public;
 - b) there is a need for pragmatism around the right level of Personal Protective Equipment (PPE) use, ^{9(2)(g)(i)} [REDACTED]
 - c) strong farm and shed biosecurity is essential. Industry is focused on this and working with MPI;
 - d) the need to consider the impact on the mental health of people involved in disposal of wildlife as well as mental health and wellbeing support for farmers;
 - e) that early and clear messaging is essential. Likely high engagement from the public will need proactive information resources; and
 - f) there is a need for clarity around roles and responsibilities when responding to local animal health and mortality events.

Response guidance documents

15. Key response documents outlining an HPAI H5N1 response are being prepared:
 - a) a National Stakeholder Guidance document will provide stakeholders with an understanding about how a Biosecurity response to HPAI may be approached; and
 - b) tactical readiness guidance document will outline detailed information about the key response procedures for the Depopulation, Disposal, and Decontamination of birds at commercial poultry operations (3D's). The Tactical Plans include standards, tools for decision making, standard operating procedures, and oversight and assurance frameworks.
16. Engagement with the poultry industry, local government and other stakeholders will strengthen these documents and to enable further alignment and refining. This will take place in mid-September.

Stakeholder engagement

17. Fish & Game New Zealand have developed an HPAI Plan. One Health agencies are providing feedback.
18. MPI had a constructive meeting with poultry industry chairs on 21 August, which addressed ways to adjust the work programme following learnings from the study tour.

Transmission in cattle

19. No evidence of HPAI infection in cattle has been observed anywhere outside of the United States, despite HPAI being well-established in European countries with large dairy industries. The spillover event from wild birds to cattle in the United States is highly likely to be the result of particular environmental and production circumstances, and the genetic adaptation of the virus to a novel strain (B3.13). This occurred in the arid Texas panhandle region, and it has been suggested that birds congregating in large numbers around cattle troughs in search of water may have been the source of infection.
20. Infected cattle show a rapid decrease in milk production accompanied by other signs of ill-health, but usually recover within two to three weeks. Transmission between cows is thought to be via milk or contaminated milking equipment, and between farms by farmers moving or selling cattle.
21. Should such an event occur in New Zealand, our legal framework and existing work to ensure the continuity of milk processing in the event of a Foot and Mouth Disease outbreak, can be leveraged for HPAI. This provides measures at individual farm level to limit the spread of the disease whilst minimising disruption to the sector.
22. MPI is continuing to engage with New Zealand livestock and pig sectors, to reinforce the importance of maintaining biosecurity measures on farm.

Free Range producers

23. MPI understands you wish to minimise the impact of a housing order on free range producers. A learning from the United Kingdom study tour was to not delay housing orders, which occurred in the United Kingdom due to free range labelling concerns.
24. There are two issues that may arise from housing orders:
 - a) it appears that an exemption for selling as free range whilst a housing order is in place is not possible: The Fair Trading Act 1986 prohibits the making of unsubstantiated, false and misleading representations, and generally conduct that misleads the public as to the nature of the goods. The Commerce Commission (the Commission) has enforcement responsibilities under the Fair Trading Act 1986, including bringing proceedings against persons who breach the Fair Trading Act 1986. We understand that the Commission does not have the ability to exempt any person or goods from complying with those provisions. It appears no other person may provide an exemption either. MPI will work with Ministry of Business, Innovation and Employment to understand if, within the constraints of the Fair Trading Act 1986 and Commerce Act 1986, there are actions the government could do to minimise the impact of housing orders. We will report back to you on this; and
 - b) 9(2)(g)(i); 9(2)(h)

9(2)(h)



Industry is very engaged to decrease the likelihood of infection

25. Industry is very engaged in increasing on-farm biosecurity. A joint industry-MPI workshop is planned for mid-to-late September. MPI will be working with industry on:
 - a) biosecurity plans to stop disease spread between sheds within farms and to stop spread between farms; and
 - b) biosecurity plans that set out how a housing order may be handled, including dealing with any poultry that cannot be held indoors due to animal welfare requirements or the absence of housing.
26. MPI understands that at least one major producer is gathering the per square metre stocking density of housing data, which will inform planning to manage housing orders with minimal disturbance.

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