

Exercise Hazel: Scottish Avian Influenza exercise evaluation and lessons Identified October 2019

May 2023

Exercise Hazel

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Version 0.1

1.1 Security Classification

This evaluation report is Official. It contains information relating to the lessons identified from the Scottish avian influenza exercise, Exercise Hazel, held on 16 October 2019.

2. Introduction

This report contains the details of Exercise Hazel, a Scottish avian influenza (AI) exercise, organised by us in collaboration with the Animal and Plant Health Agency (APHA) and a major Scottish broiler producer. The report evaluates the exercise and records the lessons identified for further action.

The primary purpose of Exercise Hazel was to test our contingency plans and policies for the control of an AI outbreak. It also tested APHA's preparedness for an AI incursion on a large-scale commercial poultry premises and raised industry awareness in the processes involved in containing and managing such a large-scale outbreak. The views of interested parties attending on the day were also sought.

This exercise was a follow on from Exercise Juniper, held in July 2018, which looked at similar issues relevant to an AI outbreak in an egg production company.

2.1 Exercise Hazel

Exercise Hazel took place on 16 October 2019. It was a one-day tabletop exercise, including presentations and group discussions. The exercise began by discussing the actions required after the identification of highly pathogenic avian influenza (HPAI) H5N1 in a dead wild bird through the GB dead wild bird surveillance scheme. For the purpose of the exercise, HPAI H5N1 was then confirmed on a poultry farm (broiler breeder unit) in close proximity to the location where the infected dead wild bird was found. In the scenario disease spread to various parts of the business. Exercise participants were asked to describe the actions that they and their organisation would undertake during each scenario.

Unlike Exercise Juniper, only a few documents were circulated in advance of the exercise. This was done with a view to increasing spontaneous responses and encourage discussion. Throughout the day, feedback was taken on flip charts at each table, and time was allowed for questions and discussion throughout the day.

2.2 Participants

Thirty-six participants took part in Exercise Hazel, including representatives from various operational partners. Unlike previous exercises, where participants were

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broken into groups, on this occasion participants had the option of free seating. However, many chose to sit with their own colleagues. All participants took part in the discussions throughout the day.

A full list of participating organisations can be found at Annex C.

2.3 Aims and Objectives

The key aim of the exercise was:

To explore procedures that would be applied for the control of a HPAI outbreak in an integrated broiler production company and surrounding area, including incident management, decision-making responses and identifying appropriate disease control and licensing measures.

2.4 The objectives were to:

- explore incident management and decision-making in response to an outbreak of HPAI H5N1 within a large commercial business;
- identify appropriate disease control and licensing measures;
- enable policy and regulatory bodies to gain an improved understanding of the operational aspects of the business and the wider pathways involved in poultry production;
- enable the company to appreciate the regulatory framework during disease control;
- examine the co-ordination and flow of information between SG / APHA / the producer;
- identify key tasks, roles and capability / capacity gaps for partners involved in a HPAI H5N1 outbreak and
- ensure that actions and owners are identified to address the identified gaps.

A survey was carried out following the exercise via a Survey Monkey Questionnaire that was sent to all attendees. Responses are detailed at Annex B

2.5 Feedback

Feedback from participants and observers of the exercise was encouraging, with around 92% of respondents noting that the objectives of the exercise were either fully or mainly met. Whilst this feedback was positive, the exercise identified a number of areas for further improvement.

These lessons are reflected in more detail throughout this report. Feedback provided by the delegates indicated that, as an opportunity for learning and development, Exercise Hazel brought improvements to Scotland's overall preparedness for an avian influenza outbreak in a large-scale broiler producer premises, through increasing awareness of avian influenza and the response structures set up to help control an outbreak.

2.6 Lessons Identified

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Lessons have been grouped into five broad categories:

- hatchery;
- licences;
- cleansing and disinfection and storage/movement of litter;
- antivirals and
- biosecurity

A summary of all lessons identified can be found in Annex A

2.7 Planning

A small scenario sub-group comprising of a representative from APHA, the producer and us which was chaired by APHA met several times to help develop the exercise scenario.

3. Lessons identified

3.1 General

As a matter of course in the event of an outbreak, our Disease Policy Unit (DPU) is convened. The DPU is primarily formed from the staff within the Disease Control Branch supplemented by additional staff dependent on the scale and scope of the outbreak. The lead role in response to such an outbreak will be taken by the Disease Strategy Group (DSG). The Chief Veterinary Officer (CVO) and the Head of the DPU in consultation with the Director, will initiate the Disease Strategy Group (DSG) which includes representatives from key areas within Scottish Government, local authorities and representatives from other key organisations depending on the circumstances. The DSG will take the lead role providing instructions to the DPU. The DPU and DSG will work collaboratively with colleagues in APHA and the Rural Payments and Inspection Division (RPID).

During an outbreak, APHA would take control of an infected premises and control all movements, ensuring that everyone is signed onto and off the site, and that they are given a full site briefing before entry. The need for APHA to gain early access to premises where AI is suspected is paramount from a disease containment perspective. Historically, APHA found that access to suspected Infected Premises (IP) in general had not always been easy, and this could cause delays in managing an outbreak.

From the onset of the exercise, the producer emphasised that it was essential to their business that their hatchery continued to operate with as much normality as possible given that it was such a vital area within their organisation. This included birds being moved to rearing premises, and from a welfare perspective, ensuring feed and other essentials were able to come onto the premises under the required licencing.

3.2 Cross Border

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It was noted there is also the possibility that areas out with Scotland (cross border) could be affected given that this producer, as with many others, has specialised premises in different parts of Great Britain. This would impact on the production of the required licences given the need to comply with the specific legislation in each country.

3.3 Hatchery

The company gave a presentation outlining their production timetable in great detail. The company's first priority in the hatchery was to continue production and continue bird welfare and to ensure the flow of eggs from the hatchery and onwards to rearing premises.

They also advised that the hatchery manager could trace the source of each egg brought into the hatchery, all of which are fumigated on initial entry and again on a daily basis whilst held in a temperature-controlled store. The producer advised that during an AI outbreak, they would do everything possible to allow movement of chicks from the hatchery. They emphasised the importance of receiving movement licences promptly to allow movement of chicks out of the hatchery as quickly as possible is critical for the business.

Any restrictions on the hatchery would cause disruption within the business. The process and benefits of pre-designating a hatchery and activation of that designation was explained. Premises in disease control zones may only send hatching eggs to a designated hatchery under a movement licence. Premises in disease control zones may only receive day-old chicks where the movement is licensed and they originate from a designated hatchery. It would be useful if hatchery staff were made aware in peace time what information would be required and what restrictions would be applied.

3.4 Lesson Identified 1

Government to outline to industry what information would be required to allow a hatchery to operate while other parts of the business were under restrictions, what restrictions would be applied in a hatchery in the event of an AI outbreak and what steps need to be undertaken in order that a hatchery may become designated.

It was noted that it would be beneficial for APHA to gain access to the hatchery quickly during an outbreak. It was also suggested that an annual contingency visit to a hatchery would allow field epidemiology investigators to acquire an understanding of the operation within a hatchery during peace time. This would in turn, enable APHA staff to understand the problems that could arise during an outbreak. It would also provide the opportunity to speed up decision making and work towards a common understanding of the licencing system, and how it works, with the overall aim of devising a slicker process. This should include single points of contact between both APHA and the producer, and ultimately result in clear roles and responsibilities.

3.5 Lesson Identified 2

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APHA to arrange annual contingency planning visits to a hatchery by field epidemiology investigators to allow better understanding of operations. This should facilitate the development of a smooth process and define clear roles and responsibilities between APHA and Producers.

3.6 Record Keeping and Good Practices

One important area discussed was the need for producers to have up to date, accurate and robust record keeping process in place. This information is important for APHA in supporting any veterinary investigation into suspect or confirmed notifiable disease. Therefore during peacetime it is important that checklists and daily tasks are completed fully and to the required standard. In the event that it was found that this was not the case then this could have a significant impact during an outbreak, cause costly delays and mean that revisits may need to take place.

3.7 Lesson Identified 3

Government and APHA to work with producers to impress upon them the importance of prompt and accurate record routine record keeping.

3.8 Licences

Discussion took place around the process for applying and issuing of general and specific movement licences. Industry representatives emphasised again, as was emphasised similarly around the need for licences covering the movement of hatching eggs and day-old chicks to/from hatcheries, which many movements were time critical and delays in processing licences would have an impact on the business.

The company required a clear understanding of what kind of template licences were available and the conditions that may be applied to ensure that issues arising during the course of an outbreak could be pre-empted and contingencies put in place to mitigate against any potential delays or impacts. There was general consensus for the need to have a smooth licensing protocol with clear roles and responsibilities for each organisation, the Scottish Government, APHA and the producer.

Clear routes of communication were needed between those requesting movement licences, particularly where the business affected included an infected premises, and the application process from initial application to approval so that industry knew where the conduit for information lay. The Forward Operating Base (FOB) was managed by APHA and they and the producer/IP should work together to identify clear points of contact. The producer advised that historically the company manager had been the main point of contact. A clear system should be put in place to include cover for rest periods and staff rotation, so that information continues to flow effectively.

3.9 Lesson Identified 4

A detailed protocol with clear roles and responsibilities for each organisation namely, the Scottish Government, APHA and the producer should be identified. This should

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include identifying key points of contact taking staff rotation and rest periods into account. This should be used during an outbreak to update the producer on timings for receipt of licences.

It was recommended that risk assessments based on HPAI H5N1 should be recommissioned and reviewed to ensure licences are up to date and any gaps are identified. Any accompanying template licences should also be reviewed/produced, so that a library of 'off the shelf licences' is maintained and developed further.

3.10 Lesson Identified 5

We, the other GB policy administrations and APHA work together to develop and improve template Veterinary Risk Assessments to facilitate the production of an 'off the shelf library of risk assessments and their corresponding template movement licences' which would be suitable for all administrations once adapted to meet specific legislative requirements.

3.11 Cleansing and Disinfection and the Storage and Movement of Litter

A detailed discussion took place on the management, movement and safe disposal of manure and litter from premises under area based movement restrictions, and from infected premises which was key to allowing secondary cleansing and disinfection to take place. The roles and responsibilities between APHA or the Scottish Environment Protection Agency (SEPA) during this process was explained but there was consensus for the need for SEPA and APHA to work together to produce guidance to provide clarity to industry on the controls/conditions applied to the movement and safe disposal of manure and litter off site.

3.12 Lesson Identified 6

APHA and SEPA should work together to produce guidance on the safe movement and disposal of licensed litter and manure off sites in infected zones.

The value of identifying in advance of any outbreak, potential areas onsite and off-site (where no poultry were kept) for storage of litter and manure, as well as having the capacity to potentially hold dirty wash water prior to final disposal was raised. It was acknowledged that any sites identified as part of the development of contingency plans would still be dependent on the advice and recommendations given by APHA or SEPA at the time of an outbreak. All parties recognised the need for early engagement on this matter.

3.13 Lesson Identified 7

Through early engagement with APHA and SEPA, individual producers should identify potential location on and off site where used litter, manure and wastewater could be stored for long periods as part of their own contingency planning for disease outbreaks.

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Once disinfected, used litter and manure on an infected premises must be covered to prevent the ingress of rodents, stored either inside a building or in a field for a period of 42 days.

Alternatively, the manure and bedding or litter could be transported under licence to a previously identified site where arrangements for receipt of contaminated material has already been agreed. It was also recognised that there were specific waste plants that have agreed to take contaminated material. Industry representatives requested a clear guidance from experts regarding areas suitable for the litter to be moved to and suitable methods of transportation.

3.14 Lesson Identified 8

Scottish Government, SEPA and APHA to collaborate on the production of guidance that could be used to assist in the identification of areas suitable for the litter to be moved for storage so as to prevent leakage. To facilitate this, suitable methods of transportation also needed to be identified.

Primary Cleansing and Disinfection (C&D) was carried out by APHA using government approved disinfectants. The process was then repeated seven days later. Secondary C & D was the responsibility of the company on the IP. It was during that time that manure and bedding or litter were removed to a previously identified area on site and securely covered for a period of 42 days to prevent the ingress of rodents.

SEPA advised that during peacetime, wastewater went onto land. Guidance available deemed the type of wastewater used in the secondary cleansing and disinfection process as hazardous. The only place known to take such material for treatment prior to disposal was Seafield in Edinburgh. Clearer guidance was required from SEPA detailing when wash water could be spread onto land and what treatment was required with infected wash water to allow this to take place.

Several suggestions about alternative methods as part of the cleansing and disinfection process were discussed:

- heating – It was noted that heat treatment in sheds had been approved in the USA so could this be considered as an approved option as part of the cleansing and disinfection process – this option could reduce wastewater?
- dry cleaning - perhaps an option before disinfection? Disinfection and then cleansing would remove organic material. It was noted that the Poultry Health Working Group (PHWG) run by the National Farmers Union Scotland (NFUS) were funding this work, which was discussed at the Cleansing and Disinfection event held in Stoneleigh in 2018.
- UV heat treatment of wastewater whilst in storage.

3.15 Lesson Identified 9

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Clear guidance was required from SEPA detailing at what point wash water could be safely spread onto land and what treatment would allow this.

3.16 Lesson Identified 10

SG and APHA to consider the viability of alternative methods as part of the cleansing and disinfection process i.e.: heat treatment, dry cleaning and UV treatment.

3.17 Antivirals

It was noted that Health Protection Scotland (HPS) continues to work collaboratively with both APHA and local NHS boards in Scotland regarding risk assessments for human health. A proportion of antiviral stock was pre-distributed to each NHS board where each local Chief Pharmaceutical Officer (CPO) authorised its use.

APHA will issue antivirals to their own staff. One issue that arose during the discussion was how and to whom antivirals should be disseminated should APHA's stock become limited.

3.18 Lesson Identified 11

Occupational Health advisers in APHA to identify the basis for allocating antivirals.

It was noted that when contractors were brought onto the site by APHA, it would be the responsibility of that contractor's employers Occupational Health (OH) provider rather than APHA to ensure that antivirals were available to contracted in staff

The producer/infected premises would be responsible for dealing with all of their own staff, including those living on site and those brought onto the site as contractors. Their local NHS board should be contacted to obtain antivirals. It was also noted that it was the responsibility of companies to provide adequate occupational health information, guidance/preventative vaccination etc. to their employees, rather than reliance on government or the NHS.

3.19 Lesson Identified 12

Scottish Government to remind industry of their requirement to have a system in place with their local NHS board regarding accessing antivirals for their staff.

3.20 Personal Protective Equipment (PPE)

As was the position with antivirals above, it was noted in the exercise that it would be the responsibility of the relevant employers to ensure their staff had the required PPE when dealing with an AI outbreak.

3.21 Biosecurity

APHA would look at engaging with producers who had a history of substandard biosecurity practices. APHA also have frameworks with all 32 Local Authorities and

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Local Authorities regularly engaged with companies regarding good biosecurity practices on premises.

The industry representatives at this exercise noted that they had a detailed biosecurity protocol, which included vehicles, foot dips, designated footwear, as well as inside/outside hand sanitisers. Good biosecurity practice should include treatments of wheels/wheel arches on vehicles, as well as the practicality of disinfecting building roofs (where wild birds may perch) which needed to be carefully measured against health and safety risks.

It was also noted that birds may need to be housed as an adjunct to other biosecurity measures, and whilst this did not severely affect companies that were meat producers, it had a significant impact on egg producers, as housing affected the ability to market eggs as free range after a certain period of time.

3.22 Lesson Identified 13

APHA to look at the engaging with any producers where they have been made aware of substandard biosecurity practices.

4. Annex A: Action Points

4.1 Lesson Identified 1

We are to outline to industry what information would be required to allow a hatchery to operate while other parts of the business were under restrictions, what restrictions would be applied in a hatchery in the event of an AI outbreak and what steps need to be undertaken in order that a hatchery may become designated.

Owner: Scottish Government.

4.2 Lesson Identified 2

Animal and Plant Health Agency (APHA) to arrange annual contingency visits to a hatchery by field epidemiology investigators to allow better understanding of operations. This should facilitate the development of a smooth process and define clear roles and responsibilities between APHA and Producers.

Owner: APHA.

4.3 Lesson Identified 3

Scottish Government and Animal and Plant Health Agency (APHA) to work with producers to impress upon them the importance of prompt and accurate record routine record keeping.

Owner: APHA.

4.4 Lesson Identified 4

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A detailed protocol with clear roles and responsibilities for each organisation namely, us, Animal and Plant Health Agency (APHA) and the producer should be identified. This should include identifying key points of contact taking staff rotation and rest periods into account. This should be used during an outbreak to update the producer on timings for receipt of licences.

Owner: APHA.

4.5 Lesson Identified 5

We, the other GB policy administrations and Animal and Plant Health Agency (APHA) work together to develop and improve template Veterinary Risk Assessments to facilitate the production of an 'off the shelf library of risk assessments and their corresponding template movement licences' which would be suitable for all administrations once adapted to meet specific legislative requirements.

Owner: Scottish Government.

4.6 Lesson Identified 6

Animal and Plant Health Agency (APHA) and Scottish Environment Protection Agency (SEPA) should work together to produce guidance on the safe movement and disposal of licensed litter and manure off sites in infected zones.

Owner: SEPA.

4.7 Lesson Identified 7

Through early engagement with Animal and Plant Health Agency (APHA) and Scottish Environment Protection Agency (SEPA), individual producers should identify potential location on and off site where used litter, manure and wastewater could be stored for long periods as part of their own contingency planning for disease outbreaks.

Owner: APHA.

4.8 Lesson Identified 8

Scottish Government, Scottish Environment Protection Agency (SEPA) and Animal and Plant Health Agency (APHA) to collaborate on the production of guidance that could be used to assist in the identification of areas suitable for the litter to be moved for storage so as to prevent leakage. To facilitate this, suitable methods of transportation also needed to be identified.

Owner: SEPA.

4.9 Lesson Identified 9

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Clear guidance was required from Scottish Environment Protection Agency (SEPA) detailing at what point wash water could be safely spread onto land and what treatment would allow this.

Owner: SEPA.

4.10 Lesson Identified 10

We and Animal and Plant Health Agency (APHA) to consider the viability of alternative methods as part of the cleansing and disinfection process i.e.: heat treatment, dry cleaning and UV treatment.

Owner: Scottish Government.

4.11 Lesson Identified 11

Occupational Health advisers in Animal and Plant Health Agency (APHA) to identify the basis for allocating antivirals.

Owner: APHA

4.12 Lesson Identified 12

We are to remind industry of their requirement to have a system in place with their local NHS board regarding accessing antivirals for their staff.

Owner: Scottish Government.

4.13 Lesson Identified 13

Animal and Plant Health Agency (APHA) to look at the engaging with any producers where they have been made aware of substandard biosecurity practices.

Owner: APHA.

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5. Annex B: Survey Monkey Questions

The objectives

To explore procedures that would be applied for the control of an avian influenza outbreak in an integrated broiler production company and surrounding area. To;

- explore incident management; decision-making in response to an outbreak of HPAI H5N1 within a large commercial business;
- identify appropriate disease control and licensing measures;
- enable policy and regulatory bodies to gain an improved understanding of the operational aspects of the business and the wider pathways involved in poultry production;
- enable the company to appreciate the regulatory framework during disease control;
- examine the co-ordination and flow of information between SG/APHA/the producer;
- identify key tasks, roles and capability/capacity gaps for partners involved in an HPAI H5N1 outbreak and
- ensure that actions and owners are identified who will address identified gaps.

1. Do you think the objectives of the exercise were met?

- Yes
- No, or partially – please provide details

Yes - 92.31% - No 7.69%

Comments – From a production company point of view clarification needed on what decisions would/should be made regarding eggs and chicks from the day AI is confirmed. Clear information on storage of infected litter and what is acceptable for the disposal of dirty wash water

2. Has your understanding of contingency planning and policies around the control of an outbreak of avian influenza improved since the exercise?

- Yes
- No, or partially – please provide details

Yes 76.92 % - No 23.08%

Comments – As per answer to previous question. There was too much use and reliance on acronyms. When the discussion became technical some of the attendees were lost which reduced the positive impact of the training

3. To improve your ability to respond to an avian influenza outbreak, what follow-up action or changes would you make to your own plans/preparedness?

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Comments – Annual contingency visits to hatcheries would allow APHA staff to understand the operation and help speed up decision making.

Clear guidance required from SEPA on when wash water can be spread to land and what treatment is required for infected wash water

Do more preparatory work now.

Not much change coming from one organisation however whilst preparing for the exercise they had a greater understanding of what action should be taken during an outbreak

4. Do you feel adequately informed about the licensing process?

- Yes
- No, or partially – please provide details

Yes 61.54% - Partially /No

Comment - To create as standard a set of licences as possible

Although unclear about what licences should be issued feel re-assured that the specialist in that area very aware of the process and procedures.

Clarity around whether licences required an application

5. If we were to repeat an avian influenza exercise, are there any particular topics which should be covered?

Comments – Forward Operating Base (FOB) perspective of an AI outbreak.

Would like further work on translating science into cleansing and disinfecting practices

Whilst the topics were good a better understanding of the hatchery's needs.

All large integrated poultry companies will have certain critical control points e.g., hatcheries, egg stores or packing stations that if restricted will cause major problems for affected companies. Any exercises focussing on these larger companies would be particularly useful

The role of epidemiology and how an outbreak would be managed corporately.

6. Please provide comments on the delivery of the day (including format and venue).

Comments - Well delivered by the facilitator with a lot of interaction from all parties involved on the day and the venue was great. Tremendous knowledge present in the room was appreciated.

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Format and venue worked well. The format allowed us to rapidly focus on some important issues

Format effective – venue was small but stimulated good discussion

6. Annex C: Participating Organisations

- Scottish Government
- Department of Environment Food and Rural Affairs
- Animal and Plant Health Agency
- Poultry Health Services
- Producer
- Scottish Environment Protection Agency
- Perth and Kinross Council
- Scottish Borders Council
- Health Protection Scotland
- Science and Advice for Scottish Agriculture
- Food Standards Scotland

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Directorate for Agriculture and Rural Economy
Scottish Government
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