On farm killing of poultry for disease control

Contingency plans

Dr. ing. Marien Gerritzen
Key issues

Contingency plan

- Farm situation
- Available methods
- Decision making
- Animal welfare
- Human safety
Key issue in a contingency plan is to prevent the disease from spreading.

The first measure to be taken is to stop all or as much as possible movements of people and materials out of the farm, or in other words; close the farm.

Second step is to identify the specific farm conditions based on which you can make decisions on; required staff, killing method, safety measures, services and materials.

Checklist:

- Size of the premise
- Location and access roads
- Number and type of buildings
- Location of the farmers house
- Distance to surrounding farms and houses
- Identify farmer family and pets
- Weather conditions
- .....
Contingency plan: Housing conditions

During an outbreak of a contagious disease you will meet different animal housing conditions. Before you can decide on the best mode of operation you need to collect as much information on the housing conditions as possible.

Checklist:
- Size of the buildings
- Natural or mechanical ventilation
- Access doors
- Animals kept inside or have outdoor access
- Obstructions in the building
- Solid walls or (semi)open walls
- Building material (wood, concrete,..)
- Surrounding surface and space
Available methods

Different killing methods are available for the killing of animals on the farm. Methods differ in working mechanism, capacity and applicability. Making a decision on the method to be used in a particular situation depends strongly on the farm situation.

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Available methods: mobile electrocution lines

Mobile electrocution lines are based on conventional slaughter lines. Birds are hatched and walked to the killing unit where they are electrocuted in a water bath while hanging in shackles.

Considerations:

• Animal handling
• Shackling conscious animals
• Number of personnel
• Limited capacity
• Easy to move
• Controllable killing method
• Easy to stop and adjust
• Applicable in many situations
Available methods: gas filled containers

Gas filled containers or culling bags are placed inside or outside the animal house. Where you place the containers depends on the access of the building.

Animals need to be hatched and placed by hand into the containers.

Considerations:

• Controllable killing method
• Easy to stop and adjust
• Applicable in many situations
• Intensive handling of live animals
• Large numbers of personnel
• Low capacity per set (operation speed)
• Exposure to high CO₂ concentrations
Available methods: Whole house gassing

Filling the whole house with a gas mixture to kill the animals is a method with a high capacity. Injecting carbon dioxide up to a level of at least 40% in the whole house is most commonly used. The gas is injected from a tanker by one or more injection points into the shed where it distributes.

Considerations:

• Difficult to control
• Difficult to adjust during processing
• Gas concentration and distribution
• Temperature development
• Not suitable for all housings, only applicable in sealable housings
Available methods: gas filled foam

To apply whole house gassing in non closable buildings the gas filled foam method is developed. A high expansion foam with large bubbles is created with nitrogen instead of air.

The foam is injected in a restricted area or into the shed covering the animals with a layer of foam filled with 99% of nitrogen. Animals will loss consciousness and die due to the lack of oxygen in the breathing air.

Considerations:
• applicable in open housings
• Low oxygen (anoxia)
• Convulsions of the birds
Available methods: Gas-filled foam in containers

A high expansion Nitrogen filled foam with large bubbles is created. The Foam is injected over the birds that are placed in a container or big-bag.

Animals will lose consciousness and die due to the lack of oxygen in the breathing air.

Considerations:

• Low oxygen (anoxia)
• Convulsions of the birds

Source; Anoxia BV, The Netherlands
Choose the optimum methodology

When you make a choice on the optimum methodology to apply you have to be aware of the limitations of the different methods.

To help you choose the optimum methodology you can ask yourself a list of questions;

• How many animals are on the farm?
• What are the housing conditions?
• What capacity do I need?
• What are the limitations of the methodology?
• What is available?
• What are the consequences for the rest of the contingency plan (human safety, animal welfare, costs, removal of carcasses, biosecurity,...)
Attention points

• Choice of method depends on the farm situation
• Respect limitation of a method
• Prevent handling of live animals if possible
• Whole house treatment if possible
• Monitor applied methods and adjust settings if required
• Check if all animals are dead
• Keep back-up measures available
• Work with trained personnel
Thank you

For questions:

Marien.gerritzen@wur.nl