RANGE MANAGEMENT FOR DISEASE CONTROL

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In the past seven years, free range chicken meat production and consumption in Australia has undergone a period of rapid expansion associated with a consumer preference for humanely-raised meat.

Free range poultry is currently estimated at approximately 30% of the chicken meat market, and is predicted to increase by 5% per annum over the next few years.

The increase in range production presents new challenges to disease control associated with exposure to the outdoor environment, involving both infectious disease agents and contamination by foodborne pathogens.

In recent years (2012 – 2013), we have experienced a trend of increased outbreaks of Avian Influenza associated with free range poultry, turkeys (H9 N2), layers (H4 N6, H7 N7, H7 N2) and ducks (H5 N?).

To date, these have been relatively isolated occurrences, readily controlled and eradicated, but still of significant cost to both industry and government. Such a trend cannot be sustained.

A similar outbreak in an intensive poultry production area would have severe economic, consumer and regulatory consequences for the free range industry.

The unique and specific challenges posed by free range production must be addressed, to ensure the continued growth and viability of the industry.

Biosecurity is the action plan to prevent or control the introduction and spread of infectious agents to a flock. Such infectious agents, either clinical or subclinical significantly reduce the productivity, food safety, animal welfare, profitability and long-term financial viability of a poultry operation.

There is a common misconception that free range farms are by nature poor biosecurity enterprises. In fact, most biosecurity principles can be effectively implemented to both intensive (shed) and extensive (free range) systems.

These include shedding and personnel standards, vermin control, dead bird and waste disposal, feed management, water quality, exclusion of wild and domestic animals and equipment, vehicle and shed hygiene procedures.

Free range birds have access to a range and are potentially exposed to a range of additional biosecurity risks and diseases, the most significant being wild birds, rodents, wild animals and airborne transmission of infectious agents.

As a result, diseases such as influenza, infectious laryngotracheitis, histomoniasis, helminths, coccidiosis and food safety pathogens such as Salmonella and Campylobacter may occur at a higher frequency in poorly-managed free range meat chicken farms.

All are controllable with effective range biosecurity.

The most significant biosecurity risks in a free range operation are;

a) Wild birds
b) Rodents
c) Wild animals
d) Airborne infection

The most serious disease threat is Avian Influenza.

SPECIFIC CONTROL PROCEDURES FOR FREE RANGE MEAT CHICKEN FARMS FOR DISEASE PREVENTION

RANGE MANAGEMENT

a) Maintain the range in a clean and tidy condition.
b) Grass should be kept short, as long grass attracts wild birds and rodents onto the range, and favours the survival of viruses and bacteria.
c) Do not plant vegetation on the range which attracts wild birds.
d) Do not provide feed on the range as this attracts birds and rodents. Always clean up feed spills around silos immediately. Isolate silos from range areas.
e) No visitors should be allowed access to the range area.
f) No access of poultry on the range to surface water including pools, puddles, dams, waterways.
g) The range must be well-drained. Do not allow free-standing water to collect. Water for range irrigation must be treated to drinking water standard.
h) There must be secure fencing of the range to prevent access to domestic (dogs and cats) and wild animals (foxes, wallabies etc). Many wild animals are reservoirs of Salmonella and Campylobacter.
i) Secured rodent baiting stations should be placed at 10 metre intervals around the range perimeter fence and around the shed. Baits should be checked weekly and replaced every 2 – 4 weeks as required by activity patterns.

AIRBORNE TRANSMISSION

a) New free range farms should be sited 3 km from other poultry enterprises, preferable in low density poultry populations.
b) Planting of trees and large shrubs can be used to filter and block airborne spread.

WILD BIRDS (PARTICULARLY WATERFOWL)

Wild birds represent the most serious disease risk to the free range chicken meat industry.
Water attracts birds and animals to the range areas.

a) There should be no dams, waterways, rivers or lakes in the vicinity of free range sheds.
b) New farms must be located away from dams, rivers, lakes etc.
c) There must be no waterfowl access to the range.
d) Install bird scaring systems, e.g. auditory, visual deterrents.
e) Shade sails act as a deterrent to wild birds on the range.
f) Ranges of free range farms in high risk areas, such as high density poultry populations or in the vicinity (< 1 km) of water bodies, dams or rivers should take precautions to prevent contact with wild birds and to prevent contact with wild birds and wild bird excrement, according to the USDA and AHIS Free Range Guidelines.
g) Farms are designated high risk or lower risk based on the following criteria;

HIGH RISK FARMS

1) In wetlands or areas where wild waterfowl or shorebirds congregate, or;
2) In high density poultry production areas.

Birds to be kept indoors or range to be covered with wire mesh or netting and solid roof.

LOWER RISK FARMS

Ranges to be covered with wire mesh or netting.

As a minimum, where ranges are in the proximity of waterways, dams and lakes etc, the range should be covered with either wire mesh or netting.

In conclusion, while free range is a challenge for biosecurity, there is still much that can be done to prevent disease challenges from entering the flock.

We must accept that free range potentially increases the risk of disease and implement specific control measures to minimize the risk.

Whilst free range is an animal welfare-friendly farming system, birds dying from disease due to inadequate biosecurity are not animal welfare-friendly.

Implementation of basic biosecurity standards and additional measures to address the challenge of an outdoor range is essential to ensure the future growth and viability of the free range sector.