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Keeping chickens in the backyard

By Harald Hoffmann, Biosecurity Communications Officer, Chris Mayberry, Veterinary Officer, South Perth and Peter Thomson, Research Officer, Forrestfield

Introduction

Chickens fulfil various roles in small farm situations. If they are free ranging, they control insects and weeds, fertilise orchards and produce eggs. They eat food scraps and loosen the soil while scratching.

In home gardens, chickens have to be more confined, as their scratching habits will destroy young plants. Many people keep them to produce eggs and fertiliser.

This Gardennote gives some basic guidance to backyard chicken keeping, fox-proofing your pens, common diseases and general management. It is also intended to increase the vigilance of the public to identify exotic diseases, which could threaten the local poultry industry.

Figure 1. Backyard chickens provide eggs and eat food scraps.

Figure 2. For small landholders chickens provide valuable pest control.

Getting started

Many breeds of chickens are available with a range of characteristics. Some are bred for looks and others for meat quality or egg production.

To start, buy four or five vaccinated hens at the point of lay (between 16 and 24 weeks depending on the time of the year) from a reliable commercial source. Many businesses advertise under 'Poultry' in the Yellow pages.

Unless you have a small landholding, avoid getting roosters, as many shires prohibit roosters in back gardens and roosters are not needed for hens to produce eggs.

Legal obligations

Animal Welfare Act 2002

All animals need to be provided with appropriate food, water and protection. Sick animals need to be treated or humanely killed.

Marketing of Eggs Act 1945

The commercial egg industry is controlled by a licensing system:

- more than 50 adult female hens – licence required
- less than 50 adult female hens – to be registered with Golden Egg Farms
- all sold eggs must be stamped.

Chicken-run (holding pen)

The chicken-run (holding pen) should be fenced in with 1.8 m high chicken mesh, as chickens can fly across lower fences. Some chickens may fly that high even with clipped wings. Enclose the top of the chicken-run to discourage wild birds from eating the chicken food and importing diseases, to stop ravens stealing eggs and prevent foxes climbing into the run and killing birds. Wire netting with mesh size not exceeding 80 mm (about 3 inches) will prevent foxes passing through a fence. If one chicken continuously flies across the fence, it should be isolated, as the others will learn the 'bad habit'.

Chicken house (holding unit)

It is important to fox-proof the chicken house (holding unit) even in the suburbs, as frequent fox attacks occur. A chicken house should be fully enclosed, with a fox-proof door, roof and floor. Unless the sides are attached to a wooden or concrete floor, they should be dug into the soil to a depth of 50 cm. Alternatively, an apron of netting angled outwards for 50 cm at the base of the fence will deter foxes from digging under the fence. This will prevent foxes from climbing or jumping over or digging underneath. Preferably, a chook house should have a concrete floor and be locked up every night.

Place the chook house facing east so that the back is towards the strong westerly, rain-bearing winter winds. A belt of vegetation to the east will help protect against the hot, dry easterlies of summer and the cold easterlies of winter, but should let in the morning sun.

Build an easily accessible chook house with enough ventilation at bird level and preferably an automatic watering system. Only store enough food in the food trough to be eaten within a week, to prevent the food from getting stale. Design the chook house so that it can be left unattended for two or three days if necessary without fear of the birds suffering in any way.

Cover the floor with 7 to 8 cm of sawdust which mixes with the poultry droppings to form 'deep litter' over a period of at least nine months. This litter can be removed periodically, composted with frequent turning for six to eight weeks and used as garden fertiliser. Unless composted, chicken litter provides a breeding medium for stable flies and many local governments have banned it from being used or stored.

The chook house should contain a perch for roosting, and nesting boxes which can be emptied from the outside.

Figure 3. A chicken house should be fox-proof.

If your chook house was built before 1984, it will have been treated with organochlorines to control termites. Most operators were very thorough and also sprayed fences, sheds, fruit trees and any timber lying around the yard. These chemicals will still be in the soil and as birds eat soil to help digest their food, the organochlorines can contaminate your birds and their eggs. If you are in doubt, soil samples can be tested at Analytical Reference Laboratories, 55 Wittenoom Street, East Perth. Phone 9221 1415.

Be sure to get approval from the local council/shire before construction. The council/shire may regulate the position of the shed and the number of birds to be kept.

To shelter the birds from the summer heat and make use of the winter sun, try to locate the house close to a deciduous shade tree on the northern side. A jacaranda, mulberry or coral tree would be suitable.

A more detailed description of a holding unit designed by the Department of Agriculture is given in Farmnote 2/84. There are also many designs of chicken coops on the internet.

Quarantine

Keep your stock as clean as possible. Do not introduce birds from different flocks. When purchasing chickens at country or farmers markets, make sure that birds were vaccinated in the first 24 hours of life against a number of viral diseases.

Feeding chooks

Chooks should have full time access to good quality nutrition, with the right quantities and balance of all the essential nutrients. If the quantity or balance is wrong, egg production or bird health will suffer. If, for example, the protein level in the diet is too low, you will get fat birds, but no eggs.

Figure 4. Chickens need a clean supply of good quality food.

The best feed for backyard chooks is commercial layer pellets. These are a well-balanced diet with a bare minimum of all the essential ingredients. Contrary to popular belief, they do not contain antibiotics or hormones, but the birds don't like them. So, if you offer them wheat as well, they will eat that in preference. The result is an unbalanced diet, less eggs, fat and maybe sick birds.

Sick chooks

Observe the flock carefully. Determine whether the problem is a flock problem or isolated to one or two birds. It is best to observe birds when they are calm and unstressed.

Healthy birds

A healthy bird should be bright, alert and active, eat often and interact with other chickens. It should hold its head high and have clean eyes and nostrils and a clean

comb and wattles. Healthy birds should have smooth feathering and clean, smooth pale legs. Faeces can vary significantly in healthy birds. Healthy birds should struggle when handled. Healthy birds may have pale combs, especially when moulting.

Sick birds

Sick birds may exhibit a range of clinical signs. They may have drooping wings and tail and discharge from the nostrils and eyes, which may then stain the feathers around the neck.

Although normal faeces may vary in colour and consistency, it should not be totally white, very bright green or contain blood. Birds with diarrhoea will often have faecal stains around the vent.

Birds' breathing should be silent and unnoticeable. Birds with respiratory disease may have laboured breathing, tail-bobbing while breathing or a cough or a snick. Unless very hot, birds should not open-mouth breathe. Birds' combs should not be dark blue or black.

Management conditions and illness

Inappropriate or inadequate feed, water, shelter or excess stress may cause illness. Because poultry are not usually handled routinely and the feathers hide the condition of a bird, owners are often unaware of how thin a bird is until it is dead.

General conditions

Chickens are naturally curious and cannibalistic. It is essential to isolate any birds with open wounds or vent problems.

Birds become egg-bound when an egg matures inside the bird, but is not laid. The vent may prolapse. Unless the bird is very valuable, euthanasia is the appropriate treatment. Egg peritonitis results when an egg ruptures inside the bird. Birds become depressed and anorexic and often die. This is a very difficult condition to treat. The most common cause is perches set too high – none should be above 60 cm from the ground.

Parasites

External parasites

Lice are small parasites which infest birds around the vent and the neck. Lice eggs bundle up to the size of a marble, becoming attached to the base of the feather.

Poultry lice eat dead skin and feather dander, and can cause severe irritation and stress. Birds often stop laying. Treat with a registered poultry dust.

Figure 5. Chicken louse.

Stickfast fleas are typically a summer/autumn condition. Birds can be infested with hundreds of parasites, particularly around the comb and eyes. Treat with a registered treatment. Repeated treatment of the environment will reduce reinfestation. Pet cats and dogs can also be affected.

Figure 6. Stickfast flea.

Mites and ticks are blood-sucking parasites that can be difficult to see. They can also be involved in the spread of other diseases. Mites and ticks may spend considerable time off the host and therefore it is essential to treat the environment, particular any nooks and crevices such as in wooden surfaces. Ticks can survive several years in hot, dry conditions without any birds being present, so beware of using old poultry facilities.

Figure 7. Chicken mite.

Internal parasites

Coccidiosis is a very severe disease of young birds, which results in the loss of blood into the faeces. Young birds can die very quickly. Older birds tend to be more resistant. Overcrowding and damp litter condition predisposes to infection and spread.

Worms are common in domestic poultry. However, unless the conditions are crowded or the birds stressed by some other condition (for example, poor nutrition), they rarely cause a serious problem.

Viral diseases

There is no satisfactory treatment for viral diseases. The five viral diseases discussed below are all included in the vaccination regime when you buy fully vaccinated point-of-lay pullets. Day-old chicks can only be vaccinated against Marek's Disease because the other vaccinations are given later in life.

Marek's Disease

Marek's Disease causes tumours, paralysis and death in young birds (6 to 26 weeks). The infection occurs in the first days of life. Vaccine must be administered in the first 24 hours of life to be effective.

Infectious Laryngotracheitis and Infectious Bronchitis

Respiratory diseases manifest by reduced egg production, coughing, mouth breathing and possibly death. Vaccine protects birds.

Egg Drop Syndrome and Avian Encephalomyelitis

Egg Drop Syndrome and Avian Encephalomyelitis are diseases of the reproductive tract. They cause very little illness, but egg production is severely affected for several weeks. Avian Encephalomyelitis may cause a severe brain disease and death in young chickens.

Fowl Pox

Fowl Pox is spread by mosquitoes. Birds develop wart-like growths on the face and vent. Some strains of pox are very severe and result in lesions in the oesophagus and often death. Other strains are milder and resolve naturally.

Bacterial and Mycoplasma Diseases

Fowl Cholera

Fowl Cholera causes reduced egg production and increased mortality. Birds appear depressed and anorexic for a few days prior to death. The disease may spread slowly throughout the flock or very rapidly. Stress predisposes birds to Fowl Cholera. Antibiotics can be used to treat Fowl Cholera, but on some properties only total destocking is effective for long-term control.

Figure 8. Fowl Cholera

Mycoplasmosis

Mycoplasmosis is very common in poultry in the metropolitan area. It causes a reduced egg production and a mild respiratory disease. It very rarely causes death unless complicated by infection with other conditions. It is difficult to control in multi-age flocks.

Exotic Chook Diseases

If your flock appears to be suffering any of the symptoms described below, contact the exotic animal disease emergency line on **0417 910 082**.

Avian Influenza

Avian Influenza is widespread in wild water birds throughout the world. It is not present in Australia. The main facts about Avian Influenza are summarised below:

- a viral disease
- contagious
- up to 100% mortality
- wild birds, particularly water fowl involved in spread
- decreased egg production (may stop totally)
- depressed, diarrhoea, blue combs

Do not use untreated surface water for poultry.

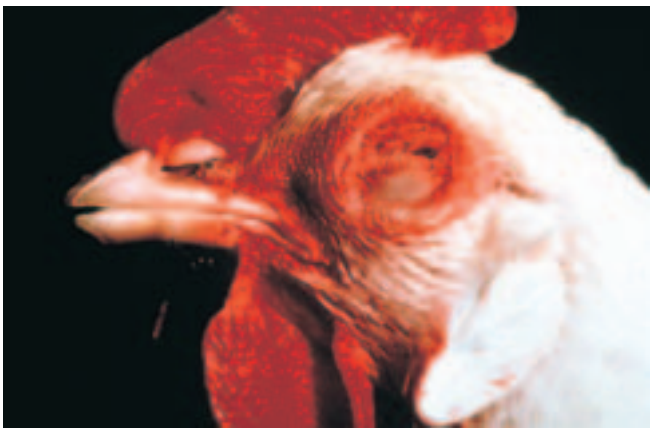

Figure 9. Newcastle Disease – note the drooping eyelid and comb and conjunctivitis.

Newcastle Disease

Newcastle Disease is found in most countries, but serious disease-causing strains are not found in Australia, New Zealand and Papua New Guinea. The following points summarise the disease:

- a viral disease
- contagious
- variable mortality, up to 90%
- wild birds
- decreased egg production
- depressed
- diarrhoea, neurological signs, respiratory signs

What to do when chickens are sick

The first thing to do is check that you have addressed the major points:

- Are the birds from a reliable source and fully vaccinated?
- Is their nutrition adequate?
- Do they have enough shelter?
- Are the premises clean?

Look at the birds themselves. One of the most common problems with backyard chooks is external parasites – stick fast fleas or poultry ticks. Stickfast fleas appear as small, shiny black dots on the combs and wattles. Ticks leave the birds during the day and hide in nooks and crannies around the roosting area until night time. To see them it may be necessary to take a torch and check the birds after they have settled for the night. The ticks appear as small grey/black dots under the wings.

The next step is to consult your private veterinarian. Departmental veterinarians are available to investigate incidents which may be of significance to the industry. If the private veterinarian is suspicious of something more serious, he/she may refer you to the Department to discuss the case further and recommend a course of action.

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