

## Keeping a Small Poultry Flock in the Top End Part 3. Care and feeding

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### LAYING HENS

Adult hens in full lay should appear plump without being over fat and should have clean, glossy (or 'fatty') unbroken feathers, becoming somewhat bedraggled as the laying period progresses and moulting approaches. The comb is full and bright red. The abdomen is soft, the pelvic bones are spread so that three fingers fit between them and the vent is relaxed, soft and moist.

Pullets coming into lay for the first time will lay intermittently for a week or two. They may not use the nest boxes but lay their eggs in the yard. Leave an egg in each box or put china eggs in the boxes to show the pullets what the nests are for.

If hens are free ranging keep them in their shed or yard until after midday as most eggs are laid in the morning and fewer will be lost. Hens usually cackle after laying an egg, a useful guide if you are trying to find an unofficial nest. However, they may cackle in a similar manner if alarmed.

If nest boxes are fouled with droppings they should be cleaned in order to prevent dirtying the eggs.

Hens will continue to lay regularly for a long time if they are not disturbed and have a suitable unchanging diet. Laying is controlled by hours of daylight and a continuous day length of 15 hours is optimal. As daylight hours shorten, egg production will decrease and the birds will eventually move into the moulting phase and may cease laying altogether.

### BROODY HENS

Laying hens will periodically stop laying and go 'broody' or 'clucky'. In doing this they are following their natural instinct to incubate eggs and rear chicks. Heavy breeds such as the Australorp and crossbreds will go broody more frequently than will White Leghorns. Since it stops egg production, broodiness is a nuisance, unless you want to hatch eggs (see later). A hen can be persuaded to abandon her broody state by putting her in a cage for several days without any eggs and with a wire netting floor so that she cannot get warm and comfortable underneath. She must, of course, have food and water.

### MOULTING

Moulting is the loss and regrowth of feathers prior to the new laying season. During the moult, fewer eggs are produced and egg production may stop entirely for six to eight weeks. A heavy parasite burden may prolong moulting and worming of heavily infested birds may precipitate moulting. Once the moult is completed, egg production slowly increases again. However, egg production in the second year is only 60-70% of that of the first year although egg size is larger.



Under natural daylight conditions in the Northern Territory, the moult period is normally February-April (eight to ten weeks). However, if pullets commence to lay less than five months prior to this (i.e. during October-January), they will not moult in the first year and should lay continuously for over a year, with moulting delayed until the following year.

For this reason point-of-lay pullets should be bought during October or December and day-old chicks in June or July.

## **TURNOVER OF THE FLOCK**

If you are looking for high production, it is not worth keeping hens for more than two years. They should produce good meat if killed at this age. Replace half the layers each year to maintain a balance between high production (first year hens) and large egg size (second year hens). If replacing with point-of-lay pullets, these should be introduced up to six weeks before older birds are culled and adequate space must be allowed for them.

## **CULLING**

Birds which are poor producers should be culled to save space and feed. Some birds lay poorly, even in their first year. They may lay only intermittently or stop laying early. It may not be easy to identify the non-layers, even in a small flock. Suspect birds may be isolated in a separate yard, if a yard is available, to see if they are laying. However, remember that moving a bird away from the flock may stress it and affect its egg production. There are a number of signs which may indicate that a hen is in poor health or is not a good layer and should be culled. These are:

- condition - noticeably fatter or thinner than the rest of the flock;
- comb shrivelled or pale or blue;
- prominent keel bone;
- prolonged moulting;
- pubic bones close together;
- hard, contracted, dry vent;
- hard abdomen;
- not eating, drooping wings, not active;
- evidence of specific disease.

A number of specific disease conditions are best dealt with by culling the affected birds. These are discussed below.

## **TABLE BIRDS**

Chickens raised for meat are reared in the same way as are those for laying and can be run together until killed for the table at about 42 days. If kept beyond this time the males should be separated from the females to prevent mounting and harassment.

## **FEED AND WATER**

### **Type of Feed**

The quality of feed is very important. Birds will lay poorly or even waste away and die on low quality or grain only diets. This is particularly true in the tropics where birds are sometimes unwilling to eat because of heat stress.

## Ready Mixed Feed

Ready mixed poultry feed is available in several forms, such as mash, crumble and pellets. Mash consists of mixed cracked grain; pellets are small hard cylinders; crumbles are finer, broken pellets. All these feeds contain vitamins and minerals as well as suitable protein and they are balanced diets, suitable for one class of birds. If you also feed whole grain, the diet may become unbalanced and adjustments will be needed to protein, mineral, (particularly calcium) and vitamin intake. Commercial feeds may vary in quality and some of the essential elements will degenerate in hot conditions. Poultry should always be given the correct type of feed. As a general rule use:

- Chicken starter feed from day-old to six to eight weeks; watch particle size of feed with very young chickens. Buy chicken starter feed medicated with a coccidiostat to protect young chickens against coccidiosis.
- Pullet grower feed until just before laying commences about 22 weeks or until the first egg.
- Layer feed thereafter.
- Breeder feed when breeding birds.

Interchanging these feeds is not recommended unless absolutely unavoidable. Pullets fed high protein/high energy starter feed will become fat and commence laying before their reproductive system is fully developed. Such hens suffer egg laying problems and tend to produce fewer and smaller eggs. Layer feed should not be fed to pullets because it contains a high level of calcium (needed for good egg shell quality) which can adversely affect pullet growth rate and general health.

If birds are doing poorly on a commercial feed, try changing the brand of feed used. Several brands are available including some from South Australia, Western Australia and Queensland.

## Home Mixed Feed

Suitable rations for the various classes of poultry can be mixed at home but it must be remembered that the feed stocks from which they are mixed must not be too old and must be properly stored and in good state. A good mix cannot be made from poor ingredients. Vitamin supplements should be kept in a refrigerator but not frozen. Recommended mixtures are shown in the table.

## Amount of Feed

Very young chickens should be fed ad lib. Estimated intake will be as follows:

- chickens 20-40 g/day/bird
- pullets 60-70 g/day/bird
- hens 80-120 g/day/bird

Birds should not be overfed because fat hens lay fewer and smaller eggs and they are usually the first to suffer from heat stress in summer. Overfeeding is generally not a problem in the Top End, where continuous access to feed all year round is acceptable but it is wise to monitor the body condition hens and reduce feed if they are becoming fat.

Do not allow uneaten food to become damp and fermented or mouldy; discard it. Clean the feed trough regularly.

Feeding whole grain (wheat) on the litter is popular. This practice encourages the hens to scratch and helps maintain good litter condition. However, caution must be used when feeding grain; excessive amounts will make the hens fat and unbalance their diet. When a complete 15% protein ration is fed, do not feed more than 10 grams of grain per head per day.

### **Storage of Feed**

Direct sunlight, heat, moisture and prolonged storage result in loss of vitamin potency. In the hot and sometimes humid conditions of the Top End feed older than one month should be considered vitamin A deficient. It is therefore advisable to buy feed that has not been stored for a long period or stored in the sun and to buy only as much as can be used within a couple of weeks of purchase. In Darwin bags of feed as small as 5 kg can be purchased. Feed should then be stored in a cool dry place, out of direct sunlight.

### **Shell grit**

Two types of grit are usually provided. One is a soluble shell grit which provides a source of extra calcium. The other is an insoluble grit, usually small stones, for improved feed grinding in the gizzard. Shell grit should be available at all times.

### **Household Scraps**

Waste products from the kitchen and garden can be fed - but with care. They must never be substituted for the birds' normal diet because scraps will not give a regular, balanced supply of food.

As a guide, feed daily amounts that the flock will clean up in 5 to 10 minutes. Care is necessary in the choice of house scraps. Do not feed tea leaves, tomato skins, orange and banana peels, raw potato peelings or coffee grounds. They are fibrous or high in tannin, are not well digested and of little value. Scraps high in salt content should be avoided. Rotting meat or vegetable matter can result in botulism outbreaks and heavy stock losses. Uneaten scraps in poultry runs will attract flies and rats or dogs.

### **Green Feed**

Fowls will readily eat leaves of cabbage, lettuce etc or thistles and other weeds and also lawn clippings. Green feed (and yellow vegetables and yellow corn) are rich in vitamin A and will darken the colour of the egg yolk. Leaves of rhubarb, dock (*Rumex acetosella*), oxalis (*Oxalis* sp), fat hen (*Chenopodium album*), and portulacca (*Portulacca oleracea*) should not be fed to poultry as they contain poisonous oxalates.

## **EGG CARE AND STORAGE**

Collect eggs at least once a day (twice if possible), particularly in hot weather.

Store eggs at 13°C and 80 to 85% relative humidity. The humidity of household refrigerators tends to cause air cells to enlarge rapidly and will reduce storage life.

Clean eggs with a damp cloth, fine sandpaper or steel wool. Do not immerse eggs in water because they have small pores in the shell and water may be drawn in, which may introduce infection and shorten shelf life.

## **POULTRY DISEASES**

Poultry diseases are dealt with in Agnotes K1 and K2. Only the most common disease conditions are mentioned here. Diseases will most commonly result from poor conditions or by the introduction of infected birds.

Sick birds should be separated from the flock and treated or killed and burned, or buried well away from the run.

When treating birds, follow the directions on the medicine container. Some treatments, particularly antibiotics, require a withholding period before the birds or their eggs can be eaten. Note this at the time of treatment and observe it fully.

## **External Parasites**

Lice, mites, ticks and stick-fast fleas will cause irritation and debilitation and will reduce egg production quite dramatically if the infestation is severe. Examine birds periodically for these parasites. It may be necessary to dip the birds, clean out litter and nest boxes and spray the shed and nest boxes with an insecticide. This should be repeated in 10 days to catch young lice or mites hatching from eggs. Where regular build-up of parasites occurs, the process should be done once or twice a year as a precaution. Lice may be introduced by wild birds.

Use only registered products for treating infestations and follow the product directions. Remember that residues of pesticides can appear in both eggs and meat of birds.

## **Scaly Leg Mite**

This mite burrows into the skin of the shank and results in scale formation and thickening of the leg. This condition may be readily treated by spraying the legs with most types of fly spray, holding the bird upside down and jetting under the leg scales. Once legs are treated, apply vaseline to soften the scales.

## **Internal Parasites**

Birds should be wormed every three to four months with a registered wormer. Young growing birds will require worming every six weeks from six weeks old to six months.

Some worming compounds will affect laying, particularly if heavy worm burdens are present.

Use registered products and follow the directions.

## **Cannibalism**

This can occasionally be a problem. It occurs more in shed birds, particularly if overcrowded. Immediately remove the injured birds. Try to distract or occupy hens by hanging grass balls or vegetable balls in the shed or run. Decrease stocking density. Try to identify offenders by blood around the beak and get rid of them since the habit cannot be cured. Beak trimming may be necessary.

## **Water Bag (Ovarian Cysts)**

Water bag is often seen in household flocks. The abdomen is swollen and the bird waddles like a duck. Over-generous feeding, particularly an unbalanced diet of too much grain or table scraps, is believed to be a predisposing cause. Feeding balanced rations will lessen the trouble.

## **ACKNOWLEDGMENT**

This Agnote series (1,2 and 3) has drawn on material from Fact Sheet No. 46/78 by Rod Woolford, Department of Agriculture, South Australia and Farmnote Agdex 451/10 by Paul Kent, Department of Primary Industries, Queensland.

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Department of Primary Industry, Fisheries and Mines

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ISSN 0157-8243

Serial No. 572

Agdex No. 450/20

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