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HOUSEHOLD POULTRY-KEEPING
How To Get the Best Results From the Backyard Flock

By R. H. MORRIS, Officer-in-Charge, Poultry Branch; R. VAGG, Poultry Instructor and M. W. G. CRITCHELL, Poultry Inspector

The widespread popularity of backyard poultry-keeping in Western Australia probably stems from our long-established tendency towards spacious living. Many of our suburban building blocks are approximately a quarter of an acre in extent so that the average householder has ample space to accommodate a few hens.

Whether backyard poultry keeping is desirable or not is a debatable point and one which cannot be answered by citing individual case-histories because of the many factors which are involved.

If established and managed in accordance with the recommendations made in this article, the backyard poultry unit should be neither unsightly nor unhygienic.

On the other hand, the type of building and equipment advocated here would involve a certain cash outlay, and the question of whether such outlay could be effectively offset by the gain in fresh eggs, poultry meat, fertiliser for the home garden and the provision of an interesting hobby is a matter for the individual householder to decide.

Obviously, the quality of the birds kept, the price of poultry foods, the owner's skill as a handyman and his degree of poultry-raising knowledge, as well as the manner in which he utilises the poultry droppings as garden fertiliser are but a few of the "intangibles" which would affect the profit and loss account in the final assessment.

REGULATIONS

At the present time there is no need for the householder to license poultry but there are restrictions regarding the sale of surplus eggs.
If a person has less than 20 hens and wishes to sell eggs, other than to the Western Australian Egg Marketing Board, or to a person who holds an egg purchasing permit, he must apply to the Director of Agriculture, St. George's Terrace, Perth, for a "certificate of approval" to sell eggs. On application for this certificate the regulations pertaining thereto will be further explained.

Any person with 20 or more laying fowls wishing to sell eggs privately should inquire at the Western Australian Egg Marketing Board, 39 Marquis Street, West Perth, for details of the necessary procedure.

Any person wishing to sell eggs direct to the Egg Marketing Board, merely delivers his surplus eggs to the egg floor.

The various local authorities have their own regulations in connection with the keeping of poultry on suburban lots, so that anyone intending to keep poultry should contact his local health authority and make himself conversant with the by-laws controlling poultry in his particular area.

**THE POULTRY SHED**

Correct housing is an important factor in profitable egg-production, and as the poultry-shed is to be a permanent feature of the backyard, it should be well-designed, well-constructed and suitably sited.

The shed shown in the illustrations can be recommended with confidence. It measures 12ft. x 8ft. and is divided into two 6ft. x 8ft. compartments. One compartment will house up to 12 laying hens which should supply the needs of the average family. The second compartment is reserved for the new season’s pullets which will replace the older birds as they reach the end of their profitable laying period.

One 6ft. x 8ft. compartment will house up to 12 hens on an intensive basis, that is they are confined to the shed without an outside run. The pullets may be also reared intensively but more uniform development is likely to be attained if they are provided with a clean grassed run. It will be noticed that the plan allows for a 12ft. x 20ft. yard at the rear of the shed. As soon as the new season’s pullets come into lay, they should be confined to the shed and the yard allowed to rest or planted to vegetables until the next season’s chickens arrive.

**Watering.**

Both compartments are identically equipped with automatic watering devices (Francis drinker type) which assure a plentiful supply of water at all times and only need to be washed out two or three times weekly.

Several types of automatic watering systems may be purchased from suppliers of poultry requisites. The one recommended is operated by the weight of water in the trough. As the quantity of water decreases, fresh supplies are added automatically.

Two separate troughs are used, one to each compartment to assist in disease control. (Young chickens are highly susceptible to disease germs which may not affect older birds.)

Each trough is 3ft. in length and is located outside the shed. A grid of 3in. steel rods spaced 2½in. apart allows the adult birds to poke their heads through to reach the water. Much closer spacing is required for the pullets and this is achieved by boring holes at appropriate distances apart in the upper and lower trimmers so that lengths of rod can be dropped in and taken out as required. The chicks will also require a ramp up which to walk to reach the water.

**Feed Troughs.**

Feed troughs, as illustrated, are supplied, one to each compartment. These are placed near the front of the shed where built-in chutes permit the troughs to be replenished without entering the shed.

**Nest Boxes.**

Built-in community nests, one to each compartment, are situated above the feed troughs, where they fit between the front studs. Constructional details of the nests are shown in the illustrations. Sliding doors allow the eggs to be collected from outside the shed.

Clean white sawdust is the best nesting material, but chaff, straw or wood-wool may be used. The birds enter and leave
the nest through the 7½in. diameter circular hole, and a hinged alighting board on the front of the nest can be raised to close the entrance at night.

Summer Ventilation.

The wire-netted door of the shed is fitted with a removable panel in the lower portion. This may be removed in summer to admit fresh air and sunshine. A 12in. deep section of the back wall above the water-troughs is hinged and may be suspended on a pair of large cabin hooks and eyes to give extra summer ventilation.

Deep Litter.

The shed shown here is designed to permit use of deep litter—a system which has achieved widespread popularity in recent years as it saves labour, reduces fly-breeding to a minimum and confines the droppings to a small area.

A deep litter shed is only cleaned out once a year, yet it is clean and odourless and birds reared on deep litter enjoy excellent health.

The floor should be concreted and is covered to a depth of two or three inches with sawdust, chopped straw or chaff. This material must be dry when put down and must be maintained in a reasonably dry condition. **Deep litter should never be allowed to become wet.**

Deep litter operates on a principle similar to that of a compost heap. The droppings fall on the litter where they are rapidly decomposed by the action of bacteria. Well-managed deep litter gradually builds up to a depth of six or eight inches of almost dry, friable, clean-handling and practically odourless material that is similar in composition to well-made compost and is equally valuable as a garden fertiliser.

The moisture contained in the fowl droppings is adequate for the requirements of the bacteria—additional moisture checks their activities and the system breaks down.

If the litter shows signs of becoming too damp and tends to pack down, it should be forked over and hydrated lime should be mixed with it at the rate of 1 lb. to every six square feet (8 lb. to each compartment). The birds should be encouraged to scratch in the litter to maintain it in a loose friable condition.

Deep litter does away with the necessity for frequent shed-cleaning. This, in conjunction with the automatic watering system and the capacious feed-troughs, makes it possible to leave the birds unattended...
Fig. 3.—Constructional details of poultry shed
for a few days with perfect safety, making it unnecessary to depend upon one's neighbours to attend the birds during short absences from home.

The Purpose of the Two Compartments.

For profitable backyard poultry-keeping, we do not recommend holding birds for longer than 16 months after they come into lay.

Pullets purchased at six to eight weeks old in late September or early October should commence laying in January. By the following January when these birds have been laying for 12 months there should be a new batch of pullets ready to replace them.

Possibly two or three of the older birds will have died or been culled during the year and among the remainder there may be birds that are worth retaining for a further four months.

The two compartments enable the older birds to be kept separately. When the old season's hens are finally disposed of in April, one compartment could be utilised for rearing a few cockerels for the table.

These should take 12 to 16 weeks to grow to table size so that there will be time to rear the cockerels and dispose of them before cleaning and disinfecting the shed in readiness to receive the batch of new 6-8 week old pullets in September or early October.

Siting the Shed.

Before erecting the shed, study the site carefully. Where possible, have the shed facing north-east or east so that it is not exposed to strong winds and is protected from driving rains and fierce summer sunshine.

Any existing shade or shelter in the form of trees, hedges or fences should be utilised to the best advantage when siting the shed.

Failing adequate shade being available we suggest that shade trees should be planted as indicated on the plan.

The white cedar or Cape lilac makes a satisfactory shade tree for the metropolitan area, as it grows quickly and withstands lopping or pruning to maintain it at a suitable size and shape.

MATERIALS REQUIRED FOR POULTRY SHED

Front Wall.

Corner Studs—3in. x 3in. 2/7ft.
Intermediate Studs—3in. x 2in. 3/7ft., 4/4ft.
Trimmers—3in. x 2in. 2/4ft., 2/2ft.
Door Timber—3in. x 1in. 2/8ft., 4/7ft., 6/2ft.
Plates—3in. x 2in. 2/12ft.
Asbestos-Cement—1 sheet 8ft. x 4ft.
Netting—4yds. of 3ft. x 2in. 19 gauge.
Hinges—2 pairs 10in. Tee.
D Gate Latches—2.
Slide Runners—4/4ft.
Slides—2 pieces 12in. x 14in. plain galv. iron.
Removable Door Panels—2 pieces 2ft. x 3ft. plain galv. iron.

Back Wall.

Corner Studs—3in. x 3in. 2/6ft.
Intermediate Studs—3in. x 2in. 3/6ft.
Brace—2in. x 3in. 1/9ft.
Trimmers—3in. x 2in. 8/3ft.
Plates—3in. x 2in. 2/12ft.
Barge Board—7in. x 1in. 1/12ft.
Corrugated Galv. Iron—5/6ft. sheets.
Plain Galv. Iron (flaps).
Mild Steel Brackets for Drinking Trough.
Cabin Hooks and Eyes.
Francis Drinkers.

Ends.

Studs—3in. x 2in. 4/7ft.
Plates—3in. x 2in. 4/8ft.
Braces—2in. x 3in. 2/10ft.
Corrugated Galv. Iron—7/8ft. sheets.

Partition.

Studs—3in. x 2in. 2/7ft.
Plate—3in. x 2in. 1/8ft.
Trimmers—3in. x 2in. 1/8ft.
Netting—6ft. of 3ft. x 2in. 19 gauge.

Roof.

Rafters—4in. x 2in. 5/10ft.
Purlins—3in. x 1in. 4/12ft.
Edge Roll—4/6ft.

Miscellaneous.

Perches—3in. x 2in. 2/6ft.

FLY CONTROL.

Even under the best of housing conditions poultry will attract flies and it is important to control these pests.

Let us consider some methods of fly control around the poultry house.

(a) Never allow poultry droppings to become wet, as wet droppings provide an excellent breeding place for flies.

(b) Keep poultry yards free from decomposing food scraps and heavy concentrations of poultry excreta.
Fig. 4.—Details of construction of partition, nest-box, and feed trough, also ground plan of sheds and yards.
Muddy yards are to be avoided as they attract flies and provide a suitable breeding ground for them.

(c) Use an outdoor spray which does not harm the birds and which has a residual killing effect for some weeks after application.

Three modern fly killing agents with a residual effect are:

**Malathion Mixture.**
1 oz. 50 per cent. malathion.
1 lb. sugar.
1 gallon water.

This preparation can be used as a bait or spray. The mixture should be sprayed on the walls and floor of the shed.

**Diazinon.**
To be used in accordance with the manufacturer's directions.

**Dipterex.**
Use 1 oz. dipterex in 3 gallons water and spray the walls and floor with a light application of the mixture.

Care must be exercised when using these sprays, never to allow the mixture to contaminate the feed or water.

**STOCKING THE SHED**

A FLOCK of 12 good laying pullets replaced every year will ensure a constant supply of eggs for the average family throughout the year. It is quite unnecessary to keep a cockerel to promote egg production and in any case the presence of a crowing cockerel is apt to annoy the neighbours. Furthermore, fertile eggs do not have the keeping qualities of infertile eggs and will deteriorate rapidly in warm weather.

Although a good pullet can be quite profitable in her second season of lay there are a number of reasons why the birds should not be retained in the household flock for longer than a 12 to 16 months laying period. Apart from the difficulty which some people may experience in knowing which birds are worthy of retention, there is a rapid fall-off in productivity after the first laying period and most hens moult and look for a rest in the autumn and early winter when the eggs are most required. The keeping of old birds also creates a housing problem in that it is good policy to house only birds of the one age together and unless the old birds are disposed of at a set time each year the stocking programme is severely interfered with.

**THE POPULAR BREEDS**

The two main pure breeds used in Western Australia are the Australorp and the White Leghorn. The first-named is a heavy bird which is noted for good winter egg production; the White Leghorn is a light, active breed that tends to be flighty and highly-strung although strains vary in this respect. It is especially renowned for its spring and summer laying.

The "First Cross," which is usually obtained by mating a White Leghorn male with Australorp females, is a popular laying bird which meets the requirements of the household poultry-keeper particularly well.

It has an egg-laying capacity equal to, if not better than, many strains of pure breeds, and is a strong, vigorous, medium-weight bird, lacking the flightiness of the Leghorn and tending to continue laying over most months of the year. Strains of the reverse cross in which the incidence of broodiness is kept within reasonable limits by selective breeding can also be expected to give good results, as can the progeny from the White Leghorn x Rhode Island Red mating.

Fig. 5.—Feed trough showing component parts. The anti-perching roller over the trough may be omitted.
WHEN TO BUY

To be sure of placing 12 laying birds in the shed each year, it is advisable to purchase 14 six to eight-week-old pullets from a reliable hatchery or “started chick” specialist.

Purchasing good “started chicks” as they are termed is recommended in preference to buying day-old chicks which require brooding equipment and special attention if they are to be reared successfully. However, in making this recommendation, it is assumed that the average householder appreciates how very important it is for the young chickens to be given a good start in life if they are to perform satisfactorily later on, and with this in view the prospective purchaser of “started chickens” is strongly advised to personally inspect the stock before he buys them to see that they are healthy and well grown for their age.

It is essential that your chickens should be well-fed and well-managed early in life and unless you can be sure of securing top quality started chickens you are advised to go the extra trouble of rearing day-olds.

Many household poultry-keepers have difficulty in obtaining sufficient eggs in the autumn and this is mainly due to the fact that their pullets have been hatched at the wrong time, or that the flock is carrying too many old hens.

The commercial egg producer has various methods of achieving good autumn and winter production—for instance by artificially lighting the laying sheds—but for the backyard poultryman the best plan is to obtain chickens hatched late in August. These should come into lay in January and if managed in accordance with the recommendations made in this article, the majority should continue in production through the year.

FEEDING THE BIRDS

CORRECT feeding plays an all-important part in the management of poultry, and most householders will find it a distinct advantage to purchase a reliable brand of proprietary mash or pellets in preference to mixing their own. Should you decide to use a prepared mash, care must be taken to ensure that the correct mixture is purchased in accordance with the age of the birds and the method of feeding.

The following recommendations apply under the “all-mash” system of feeding in which no grain is fed—

From day-old to 7 weeks, a chick starter with 16 per cent. of protein should be fed.

From 8 weeks to 12 weeks, a 15 per cent. protein mash is required.

From 13 weeks to 18 weeks, a 14 per cent. protein grower’s mash should be fed.

From 18 weeks onwards in the case of the all-mash system of feeding, a 16 per cent. protein layer’s ration should be fed, or if whole grain is being fed at the rate of 2 oz. per bird per day, a 20 per cent. protein mash is required. Pellets with the same feeding value as the mashes listed are available and can be substituted if desired. Very small pellets called granules are available for small chickens.
All the above mashes should be fortified with Vitamins A and D3 and wherever possible, fresh chaffed-up greenfeed should be fed daily in addition to the mashes.

Should you wish to prepare your own poultry mash and rear your own chicks from day-old, the following poultry feed mixtures will give good results. Rations 1, 2, 3 and 4 are designed to be fed under the all-mash system of feeding.

1. From day-old to 7 week (16% Protein Ration).

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>lb</th>
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<tbody>
<tr>
<td>Bran</td>
<td>3</td>
</tr>
<tr>
<td>Pollard</td>
<td>3</td>
</tr>
<tr>
<td>Wheatmeal (coarsely gristed)</td>
<td>10</td>
</tr>
<tr>
<td>Whalemeal (60 per cent. protein)</td>
<td>1</td>
</tr>
<tr>
<td>Buttermilk powder</td>
<td>1</td>
</tr>
<tr>
<td>Dried brewer's yeast</td>
<td>1</td>
</tr>
<tr>
<td>Boneflour</td>
<td>1</td>
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</table>

To every 20 lb. of this mixture add 1 tablespoon of a reliable Vitamin A and D3 supplement containing 5,000 International Units of Vitamin A per gramme or its equivalent. These supplements are available from suppliers of poultry foods.

2. From 8 weeks to 12 weeks (15% Protein Ration).

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<tr>
<td>Bran</td>
<td>5\frac{1}{2}</td>
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<tr>
<td>Pollard</td>
<td>3\frac{1}{2}</td>
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<tr>
<td>Wheatmeal (coarsely gristed)</td>
<td>14\frac{1}{2}</td>
</tr>
<tr>
<td>Whalemeal (60 per cent. protein)</td>
<td>2\frac{1}{2}</td>
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<tr>
<td>Boneflour</td>
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Also include 1 tablespoon of a reputable Vitamin A supplement containing 5,000 International Units of Vitamin A per gramme.

3. From 13 weeks to 18 weeks (14% Protein Ration).

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<td>Bran</td>
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<tr>
<td>Pollard</td>
<td>2</td>
</tr>
<tr>
<td>Wheatmeal (coarsely gristed)</td>
<td>14</td>
</tr>
<tr>
<td>Whalemeal (60 per cent. protein)</td>
<td>1\frac{1}{2}</td>
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<tr>
<td>Boneflour</td>
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Also include 1 tablespoon of a Vitamin A supplement containing 5,000 International Units of Vitamin A per gramme.

4. 16 per cent. Protein All-mash Layer's Ration.

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<th>Ingredient</th>
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<tr>
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<tr>
<td>Pollard</td>
<td>2</td>
</tr>
<tr>
<td>Wheatmeal (coarsely gristed)</td>
<td>12</td>
</tr>
<tr>
<td>Whalemeal (60 per cent. protein)</td>
<td>2\frac{1}{2}</td>
</tr>
<tr>
<td>Boneflour</td>
<td>4</td>
</tr>
<tr>
<td>Oysterflour</td>
<td>1\frac{1}{2}</td>
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Also include 1 tablespoon of a Vitamin A supplement containing 5,000 International Units of Vitamin A per gramme or its equivalent.

5. 20 per cent. Protein Layer's Ration (fed ad lib together with 2oz. of wheat per bird per day).

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<td>Bran</td>
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<td>Pollard</td>
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<tr>
<td>Wheatmeal (coarsely gristed)</td>
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<tr>
<td>Whalemeal (60 per cent. protein)</td>
<td>2</td>
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<tr>
<td>Boneflour</td>
<td>2\frac{1}{2}</td>
</tr>
<tr>
<td>Oysterflour</td>
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</table>

Also include 1 tablespoon of a Vitamin A supplement containing 5,000 International Units of Vitamin A per gramme or its equivalent.

In addition to these rations, fresh succulent greenfeed should be fed daily at the rate of 1 to 2 oz. per bird per day. This level of greenfeed will ensure that the eggs have bright-coloured yolks.

Fig. 7.—White Leghorn hen

711 Journal of agriculture Vol. 6 1957
In these rations whalemeal has been used as a source of animal protein. Should meatmeal with a protein content of 50 per cent. be used, 6 lb. of meatmeal should be substituted for 5 lb. of whalemeal which normally contains 60 per cent. of protein.

The method of feeding adopted by the householder is a matter of personal choice, but the dry feed method where the mash is before the birds through the day in a trough will be found very convenient.

The "mash-grain" system of feeding is also very satisfactory. For laying birds, a trough containing a 20 per cent. protein mash is placed before the birds at all times, and 2 oz. of wheat per bird is fed to the fowls at some time during the day, usually in the evening.

Suitable grit is important in aiding the digestion of the birds and a supply of 3 in. screened blue-metal should be available at all times.

Further information on poultry feeding can be obtained from the Poultry Branch of the Department of Agriculture.

Use of House Scraps as a Food Supplement.

Most householders like to supplement their poultry feed with the scraps left over from the table. It must be pointed out however, that careless use of these scraps can prove costly.

All house scraps must be boiled thoroughly before feeding them to the birds and should be incorporated in a wet mash, using the liquid from the scraps to dampen the mash. This procedure immediately creates additional management problems such as having to feed the birds before hurrying off to work, and making sure that the mash is all eaten and not left around to attract flies. It also cancels out the advantage of being able to leave the poultry for two or three days at a time as is possible with dry mash feeding.

Hens can easily become affected with botulism if they eat decaying food scraps. This is a type of poisoning which usually proves fatal.

The Importance of Vitamin A.

An adequate Vitamin A intake is necessary to keep the birds in good health. It increases the bird's resistance to many infectious diseases, and above all, it encourages good egg production.

If prepared mashes are bought, it is advisable to purchase those which are already fortified with this important vitamin. Some prepared mashes are fortified with Vitamin A; some are not, so this point requires watching.

The supplement used for chickens from day-old to seven weeks should contain Vitamin A and D3, whereas older chickens and adult fowls usually have access to adequate sunlight and therefore need only Vitamin A fed to them.

Another source of Vitamin A is greenfeed. Greenfeed contains carotene and this, when consumed by the bird, is converted to Vitamin A. Certain plants con-
tain more carotene than others, and the younger the plant the higher its carotene content. Old fibrous plant material has a very low carotene content.

A deficiency of Vitamin A results in poor growth and development, and encourages infections, particularly in the eye, upper respiratory tract, the intestines and kidneys. Vitamin A is stored in the liver and when the reserve of this vitamin is depleted through faulty feeding, several weeks elapse before any clinical symptoms can be observed. In severe cases of Vitamin A deficiency hundreds of pustules the size of a pin's head, develop on the wall of the gullet, and the eyes discharge and become covered with a white film. This film appears as a false eyelid that reaches out over the eye from the inside corner, and in the early stages is most noticeable when the bird blinks.

Vitamin A deficient birds are most susceptible to respiratory diseases such as fowl pox, coryza and infectious laryngotracheitis. Should any of these diseases put in an appearance in a flock, which is suffering from a Vitamin A deficiency, the mortality rate can be extremely high.

(To be continued.)
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