Producing poultry meat for profit

D. K. Giles

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To show a good profit from the sales of poultry meat it is obvious that the prices received for the finished birds must be well above the cost of bringing them to marketable weights. Feeding and management costs are under the control of the producer—he can keep them at a reasonably low level by good farming practices—but market prices are beyond his influence.

Several factors play an important role in successful poultry meat production. Some of the most important are listed below:

Rapidly Growing Birds.

The producer's aim should be to market the maximum weight of good quality carcasses for the lowest possible outlay, and birds which will grow quickly are the first essential if outlay is to be kept small. Choose birds of suitable healthy quick-growing strains and feed them the cheapest ration that will ensure good carcass weights in the shortest possible time.

Mortality.

There is no profit in dead chicks, so the successful producer must cut down mortality rates by attention to sound breeding, good feeding and management and by making every endeavour to keep them free from disease.

Labour.

The return per bird is small so that the greater the number of birds handled efficiently by each man, the greater will be the profit.

Capital.

Lack, or misuse of capital causes many of today's failures. The farm must be large enough and sufficiently well-equipped to provide an adequate living. Many farmers do not possess sufficient ready cash to purchase equipment and operate a property and consequently must depend upon borrowed money.

Banks and other financial institutions are naturally only interested in lending money where they can see that it is a safe investment. They require the property to be equipped with sound buildings and adequate equipment which will last at least long enough to give them a satisfactory asset during the term of the loan.
Very few farmers can afford to pay cash for large quantities of feeding stuffs and replacement stock so that short-term loans are also essential.

In such cases the security of the financing institutions lies in the efficiency of the farmer. If he is a good manager and makes consistent profits he is a sounder investment, from the banker's or feed merchant's point of view, than the happy-go-lucky farmer who occasionally lets his brooders go out.

Marketing.

The poultry meat producer has his own special marketing problems as the profit per bird is usually small, and the age at which he sells his birds to obtain the maximum profit can be limited to a few days. This means that a small drop in prices can turn potential profits into losses. On the other hand an unexpected rise in prices could lift the profits well above the original estimates. Few producers can afford to gamble on market fluctuations however, so a wise man will seek some form of insurance against losses from this cause. Possibly the soundest insurance is to contract for the sale of his birds before they are housed. He then knows the gross price he will receive and the particular body-weights required so that it is not difficult for him to make a fairly sound assessment of his chances of profit.

A second safeguard is to prepare for times when prices may be low by starting a reserve fund when prices are high. Any extra profits, over and above the normal margin, should be put aside and held in reserve to off-set possible future losses.

The farmer who rears carcass poultry as a side-line to other activities, has an alternative means of safeguarding his investment. During periods of depressed prices it is not difficult for him to divert his feeding stuffs into other forms of production—or alternatively he can sell his stocks and still live on the income from his other farming activities until conditions improve.

Fig. 1.—Poultry meat production is big business in the U.S.A. This shed is part of a plant producing table birds for the home and export market and gives some idea of the scale on which operations are conducted in that country.
CORRECT feeding is essential if we wish to make a profit from the production of poultry meat. It is obvious that the most efficient ration is the one that will give the most rapid weight gains for the least expenditure on feeding stuffs—in other words one that gives the producer the maximum income for the minimum outlay.

In order to obtain information concerning the most suitable ration, the Department of Agriculture’s Poultry Research Station instituted feeding experiments in July 1954. In these experiments 60 different rations were fed to first-cross cockerels.

To indicate the scope of these experiments it is worth mentioning that the best ration produced an average live-weight of 3 lb. at 12 weeks of age, and the worst only 1½ lb. live-weight at the same age. Again, at 12 weeks the best ration required 3¾ lb. of food for each 1 lb. gain in live-weight while the worst required 6 lb. of food to produce the same gain.

The ration recommended here is the one which gave the best all-round results in the experiments. The experiments are still being continued in the hope of finding still more efficient methods of feeding and as new information comes to hand, so our recommendations will be modified accordingly.

The recommended ration is in two parts—1A for birds up to six weeks of age, followed by 1B which is suited to birds from seven to 16 weeks of age. The compositions of the recommended rations are shown in Table "A."

<table>
<thead>
<tr>
<th>TABLE &quot;A&quot;—A RECOMMENDED RATION FOR POULTRY MEAT PRODUCTION.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ration 1 A</strong></td>
</tr>
<tr>
<td>Chicks to 6 weeks.</td>
</tr>
<tr>
<td><strong>Wheatmeal</strong></td>
</tr>
<tr>
<td><strong>Bran</strong></td>
</tr>
<tr>
<td><strong>Dried Butter Milk Powder</strong></td>
</tr>
<tr>
<td><strong>55% Animal Protein (Meatmeal and Whalemil)</strong></td>
</tr>
<tr>
<td><strong>Tricalos</strong></td>
</tr>
<tr>
<td><strong>Manganese Sulphate</strong></td>
</tr>
<tr>
<td><strong>Vitamin A and Vitamin D 3.</strong></td>
</tr>
<tr>
<td><strong>Riboflavine</strong></td>
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</tbody>
</table>

* ½ oz. per ton.

The feeding of both green feed and insoluble grit in addition to the above ration could be commercially profitable.

Both rations have a crude protein content of 18 per cent, and a ratio of 60 parts by weight of wheatmeal to 20 parts of bran.

At all ages this ration was more efficient than any other ration used. Growers will find that the body-weights will vary with different strains but the ratios will be similar, and the weight of food required to produce 1 lb. live-weight will vary very little.
As was stated earlier, the margin of profit on each individual bird is small, so that
the age at which the birds are marketed becomes a very important factor in poul­
try meat production. The time at which sales may be made to the best advantage is
naturally influenced by many factors. Price fluctuations due to market demands, the
live-weight requirements of the processors, weather conditions, the availability of
labour at any given period and the current costs of feeding-stuffs, all play their parts.

As a broad general rule however we re­
commend that birds should be marketed
between the 11th and 14th weeks as it
is during this period that the greatest
profit per bird is most consistently avail­
able.

For example if we take 2s. 6d. per lb. as
the live-weight return, an 8-weeks old
bird of 1½ lb. live-weight would bring 3s 9d.
Food costs at this age, in the case of the
experimental birds, averaged 1s. 2½d., leaving a profit over food costs of 2s. 6½d. or
an average weekly profit of 3.8d. per bird.

A 12-weeks-old bird of 3 lb. live-weight
would bring 7s. 6d., at a food cost of
2s. 10d. This would leave a net profit of
4s. 8d., or an average weekly profit for the
period, of 4.7d.

Comparative figures for various ages
and weights are given in Table. "B."

These figures are based on a live-weight
return of 2s. 6d. per lb. and feed costs at
£30 per ton.

It will be seen from these figures that
the 11 to 14 week period gives the highest
average weekly profit per bird. At these
ages we have a popular range of live­weights for the processor to choose from.

TABLE "B"—AVERAGE FOOD CON­
SUMPTION AND PROFITS AT DIF­
FERENT AGES.

<table>
<thead>
<tr>
<th>Age in Weeks</th>
<th>Live-Weight</th>
<th>Food Consumption</th>
<th>Gross Return per Bird</th>
<th>Food Costs</th>
<th>Net Profit</th>
<th>Average Weekly Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>1-5 lb.</td>
<td>4.2</td>
<td>3 s. 9 d.</td>
<td>1 2½d.</td>
<td>2 s. 6½d.</td>
<td>3 s. 8d.</td>
</tr>
<tr>
<td>9</td>
<td>1-8 lb.</td>
<td>5-4</td>
<td>4 s. 1 d.</td>
<td>1 s. 7½d.</td>
<td>3 s. 3½d.</td>
<td>4 s. 3½d.</td>
</tr>
<tr>
<td>10</td>
<td>2-2 lb.</td>
<td>6-7</td>
<td>5 s. 7½d.</td>
<td>2 s. 4½d.</td>
<td>4 s. 4½d.</td>
<td>5 s. 6½d.</td>
</tr>
<tr>
<td>11</td>
<td>2-6 lb.</td>
<td>8-1</td>
<td>6 s. 7 d.</td>
<td>3 s. 3½d.</td>
<td>5 s. 5½d.</td>
<td>6 s. 5½d.</td>
</tr>
<tr>
<td>12</td>
<td>3-0 lb.</td>
<td>9-6</td>
<td>7 s. 6½d.</td>
<td>4 s. 3½d.</td>
<td>6 s. 6½d.</td>
<td>7 s. 6½d.</td>
</tr>
<tr>
<td>13</td>
<td>3-3 lb.</td>
<td>11-2</td>
<td>8 s. 3 d.</td>
<td>5 s. 3½d.</td>
<td>7 s. 6½d.</td>
<td>8 s. 6½d.</td>
</tr>
<tr>
<td>14</td>
<td>3-6 lb.</td>
<td>12-9</td>
<td>9 s. 1 d.</td>
<td>6 s. 5½d.</td>
<td>8 s. 8½d.</td>
<td>9 s. 8½d.</td>
</tr>
<tr>
<td>15</td>
<td>3-8 lb.</td>
<td>14-6</td>
<td>9 s. 9½d.</td>
<td>7 s. 7½d.</td>
<td>9 s. 10½d.</td>
<td>10 s. 10½d.</td>
</tr>
<tr>
<td>16</td>
<td>4-0 lb.</td>
<td>16-3</td>
<td>10 s. 0 d.</td>
<td>8 s. 10½d.</td>
<td>10 s. 12½d.</td>
<td>11 s. 12½d.</td>
</tr>
<tr>
<td>20</td>
<td>4-7 lb.</td>
<td>23-5</td>
<td>11 s. 10½d.</td>
<td>9 s. 13½d.</td>
<td>11 s. 15½d.</td>
<td>12 s. 15½d.</td>
</tr>
</tbody>
</table>

Net profits are higher in the case of
older and heavier birds but these returns
are offset by added labour costs which
have not been included in these calcula­
tions.

Furthermore by quitting the birds at
11 to 14 weeks of age the brooder-houses
and installations can be used to turn out
three batches of birds each year, allowing
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circumstances we recommend that the birds should be marketed at approximately 12 weeks of age.

For instance it will be noted from the Table "B" that at 2s. 6d. per lb. the actual decline in net returns does not occur until the 16th week. A little calculation will show that if the live weight price dropped to 1s. 6d. per lb. the net return reaches its peak at 13 weeks and declines immediately, if the birds are kept longer.

Premium Payments.
So far we have discussed returns on a basis of flat rate payments per lb. live-weight.

It should be the aim of a producer to utilise his buildings and equipment to the fullest possible extent in order to obtain the greatest returns from his capital investment, so that, if they are being used for meat production only we strongly advocate rearing three batches annually. If birds are kept longer than the 14 weeks maximum it will be difficult to rear three batches under ideal conditions.

It will be obvious too, that the longer the birds remain in the producer's possession, the greater will be the risk of losses from disease and injuries.

These hazards tend to increase rapidly after about the 12th week because the increasing size of the birds tends to cause overcrowding.

Another point which affects the quitting period is that if the price per lb. live-weight falls below 2s., the age range at which the birds can be disposed of profitably is narrowed considerably. Under such

Fig. 4.—A view of the cages housing birds during the feeding trials conducted at the Department of Agriculture Poultry Research Station, Herdeman Lake. The birds were hot-water brooded in these cages on deep litter and housed in them throughout the experiment adequate time for disinfection and maintenance of buildings, and also for a suspension of activities during the unfavourable summer period.

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Under certain circumstances it is possible that a demand could arise for lighter or heavier birds to meet special processing requirements. In such a case, a premium payment would be needed to give satisfactory returns.

For example if the normal return for a 12-weeks-old bird was 2s. 6d. per lb. live-weight, the price for an 8-weeks-old bird would need to be 3s. per lb., and the price for a 16-weeks-old bird 2s. 9d. per lb. to give an equivalent average weekly profit.

In these calculations we have again ignored the time factor with its attendant risks and added labour costs. If these are to be taken into consideration some slight reduction in premium might be permitted on the light weight birds and conversely an extra premium would be needed for the heavy weights.

ACKNOWLEDGMENT

Grateful acknowledgment is made to a number of people who assisted in the conduct of these experiments. In particular the author wishes to thank Mr. R. Hickson of Swan View who donated the day-old cockerels used in the trials; Mr. N. S. Stenhous of the C.S.I.R.O. section of Mathematical Statistics for the statistical analyses; also Messrs. R. J. Moir and H. P. Schapper of the Institute of Agriculture, University of Western Australia for helpful suggestions and criticisms.

(To be continued.)