

it is essential to have the brooding equipment and necessary food ready for immediate use. When the chicks arrive a buyer should not be caught without some essential piece of equipment or the proper food and in consequence have "to make do" for the first day or two. This may well result in a check to the growth and health of the young chicks—a check from which they are not likely to recover fully—as well as possible early losses.

Some household poultry keepers or prospective ones may not know that day-old chicks may be purchased (a) as hatched; that is, cockerels and pullets mixed in approximately even numbers, (b) as day-old pullets, or (c) as day-old cockerels. Commercial poultry farmers employ chick sexers, who can separate day-old pullets and cockerels. Chick sexers are not infallible, but an efficient chick sexer will carry out his work with an average of about 95 per cent. efficiency. It is not uncommon, therefore, to find a cockerel among a small batch of day-old pullets or a pullet among cockerel chicks.

A newly hatched chick contains the yolk of the egg from which it has hatched. This yolk is gradually absorbed as food by the chick during the first 2 or 3 days of life, and because of this baby chicks can be sent in boxes for long journeys which may take a day or more. If day-old chicks had not these yolks on which to feed, it would be most difficult to dispatch them from a breeder's farm to customers all over the country. Buyers should not worry, therefore, if chicks are some hours on a journey before they are delivered; provided they are properly packed, they will not be harmed.

### Where to Rear Chicks

It is highly desirable to ensure certain environmental conditions for chicks if they are to be reared successfully. Ample light, good ventilation without draughts, and a dry floor are the first essentials. Householders may have a shed or a disused room with these essentials. A wooden floor or a dry concrete one is satisfactory, but either should be covered with 2 to 3 in. of chopped straw, sawdust, or fine shavings. It is essential that this litter be dry at the start and be kept dry throughout the brooding period.

Any condition approaching stuffiness in the atmosphere, during night or day, should be avoided. Provided chicks have a warm area to go to, the fresher the atmosphere is the better. Chicks do not need coddling. However, floor draughts can be fatal.

### The Heating Unit

Two types of infra-red brooding units or heaters can be bought which are suitable for rearing small units of chicks. One is an infra-red lamp which is suitable for brooding up to about 2 dozen chicks and the other is a dull emitter infra-red heater. Both are suitable for the household poultry keeper. Care should be taken to follow the instructions issued by the makers, particularly in regard to the distance between the heating unit and the floor at the different ages of the chicks during the brooding period. It is important to enclose the baby chicks at the start with a surround made of



A netting ramp from the floor to the front of the training perches enables pullets to be driven up to learn to roost. [Green and Hahn

wood or cardboard as shown in the illustration on page 103. This surround is gradually widened outward after the first 2 to 3 days when the chicks have become used to the source of heat. Ultimately the surrounds are removed and the chicks permitted the use of the complete floor area. Care should be taken to keep the litter stirred and clean where the chicks sleep under the infra-red lamp or unit. A little clean litter added to this area from time to time is desirable.

### The Post-brooding Stage

Under ordinary circumstances chicks require no heat after they are 5 or 6 weeks of age; in fact very little heat is required after 4 weeks, depending on the weather. After the chickens are 6 weeks of age it is an advantage to get them off the floor, as if they are allowed to remain on the floor, they are liable to crowd in corners at night and overheat and sweat and in some cases smother each other. An easy method of perching the birds in the early stages is to have a wooden frame covered in 1 in.-mesh wire netting raised about 18 in. to 2 ft. off the ground and to drive the young birds up on to this by means of a wire or sacking ramp in the evening as shown in the illustration on this page. After a night or two they will go up on their own. Perching on this wire frame, the birds are surrounded by fresh air and cannot sweat.

### Feeding

When the chicks arrive they should be placed inside the surround under the heat, care being taken that water is available from the start. The water should be placed near the warmth 12 hours before the chicks arrive or water should be used which has had the chill taken off. Ice-cold water in winter is not good for day-old chicks as a first drink. There are advantages

in placing day-old chicks under the brooder heating unit late in the afternoon and allowing them to rest overnight before feeding, unless they have travelled a long distance and are very hungry.

Young chickens during their first 6 weeks require mash and grain. A No. 1 chick mash or starter should be used, being placed in a metal or wooden trough and available to the birds all day. A No. 1 chick grain or feed is placed on a wooden board or even on paper at first, being given at least three times a day. A quantity should be placed on the board and the chicks allowed to eat from this for 20 to 30 minutes, after which it should be removed until the next meal. After 2 weeks a No. 2 chick feed, which is coarser, should replace the No. 1 feed.

A daily feed of greenfeed is an important part of a chick's diet, and should be finely chopped lettuce, fresh grass clippings, or freshly cut green oats, cut when about 3 in. high.

### Importance of Fish Oils

A mistake often made by inexperienced poultry keepers is to omit fish oil in the mash. Feeding fish oils containing vitamins A and D are readily obtainable. Vitamin A is essential for growth and health, and vitamin D prevents rickets or what is often termed "going off their legs". Where chickens are reared inside the oils must be fed in the mash if rickets is to be prevented. Many inexperienced poultry keepers have this trouble with their chickens through not being aware of the necessity of supplying fish oil in the diet. Three tablespoons should be thoroughly mixed in with each 10 lb. of mash.

Last, the chickens should be supplied with a shallow box of small chick grit or fine oyster shell.