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# SELECTION AND CARE OF POULTRY BREEDING STOCK



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**T**HIS BULLETIN has been written briefly and in simple terms for the beginner, and especially for members of the Boys' and Girls' Poultry Clubs. It gives information that should lead to the production of an ample supply of good eggs for hatching.

Contribution from the Bureau of Animal Industry

JOHN R. MOHLER, Chief

Washington, D. C.

August, 1920

# THE SELECTION AND CARE OF POULTRY BREEDING STOCK.

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*Animal Husbandry Division.*

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## KEEP STANDARDBRED STOCK.

ONE of the essentials for success in poultry-club work is good stock. This means standardbred stock;<sup>1</sup> for this stock has been bred and developed for specific purposes and therefore best meets the needs of the boy or girl. A flock of standardbred fowls possesses a uniformity of appearance which the mongrel flock never has, and will arouse the club member's pride and lead to better care.

Moreover, standardbred fowls produce eggs and table carcasses which are much more nearly uniform in size, shape, and color, and which therefore bring better prices. It costs no more to feed and care for standardbred fowls than for mongrels, and there is often an added income possible from them, which may amount to a handsome profit from the sale of breeding stock or eggs for hatching.

## HEALTH AND VIGOR.

Only by continuous selection for health and vigor is it possible to build up a flock which will produce fertile eggs, strong chicks capable of making quick growth, and pullets with sufficient stamina to withstand the strain of heavy egg production. The appearance of a bird is not always a sure indication of its vigor, but appearance and action taken together are a fairly reliable guide for picking out vigorous birds.

The comb, face, and wattles should have a good, bright color; the eyes should be bright and fairly prominent, and the head should be comparatively broad and short, having a fairly short, well-curved beak and showing no tendency to be long, "snaky," or "crow-

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<sup>1</sup> Standard varieties of chickens are described and illustrated in *Farmers' Bulletins* 806 (the American class), 898 (the Mediterranean and Continental classes), and 1052 (the Asiatic, English, and French classes).

headed." The bird should be alert and have a strong, vigorous carriage; the legs should be set well apart and strongly support the body, giving no indication of weakness or a knock-kneed condition (see fig. 1). The bone, as seen in the shank, should be strong and not too fine for the breed, while the toes should be strong, straight, and not too long. The plumage should be clean and smooth, as a lack of condition often accompanies soiled, roughened plumage.

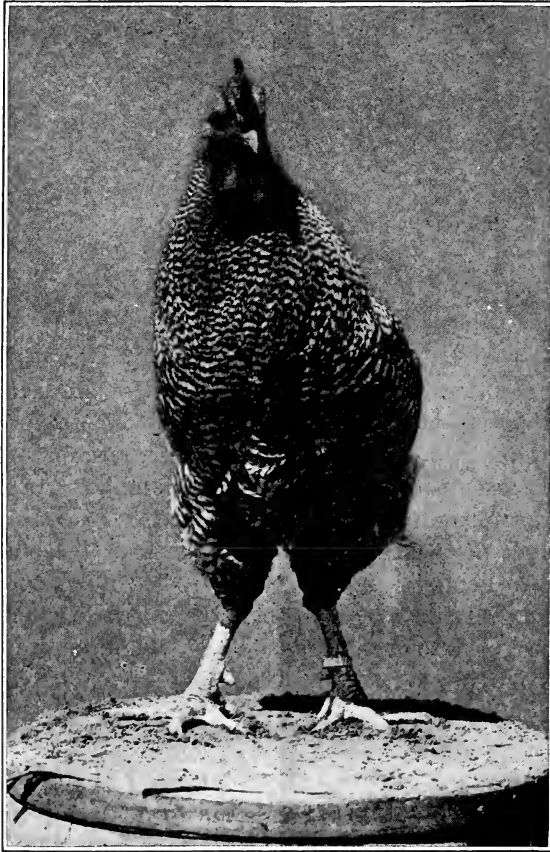


FIG. 1.—A knock-kneed male bird—an undesirable breeder.

The condition of flesh should be good, as a very thin bird is usually in poor health. Sick fowls or fowls which have apparently recovered from sickness should never be used by the club members for breeding if it can be avoided.

#### **OBJECT OF BREEDING.**

In selecting stock for mating, the club member must keep clearly in mind the purpose of the breeding. If it is the purpose to produce exhibition stock, it is necessary to select birds that are nearest the



standard in color, type, and markings, or which when mated will combine their qualities so as to produce offspring most nearly conforming to the standard.

If the desire is to produce table fowls, a breed that has a standard type, or a body shape suitable for carrying an abundance of meat should be selected. They should be broad and deep of body, have good length of back and keel, and especially a broad breast well covered with meat. If the desire is to breed for eggs, birds should be chosen, so far as possible, that are good egg producers or are the offspring of good egg producers and conform to the standard requirements for the breed. If hens are trap-nested, it is easy to make the



FIG. 2.—A poor producer, having laid but 80 eggs in a year.

selection on the basis of good egg production. If trap nests are not used, it will be necessary to make observations of the stock several times during the fall, from August to November, in order to note which are the best layers as indicated by the time of molt and lateness of laying. For information how to make such a selection, see *Farmers' Bulletin 1112*.

Whatever the purpose of the breeding, progress will be made most quickly by picking out the best individuals in the flock and using them as breeders rather than by breeding from the flock as a whole. The selection of a male for the mating will be influenced largely by the character of the females used. If there is a general weakness in the females in any respect, this should be offset so far as possible by strength in that particular in the male used.

**TIME OF MATING.**

Matings should be made at least 2 weeks before beginning to save the eggs for hatching. If less time is allowed, the maximum fertility is not likely to be obtained. It is often desirable to mate even further ahead than 2 weeks so that a few eggs can be incubated for 5 or 6 days to see whether they are fertile. If these eggs are not fertile, there is still time to change the male bird and thus be sure of fertile eggs for the earlier hatches.

**SIZE OF MATINGS.**

The breed influences the size of the matings. If the fowls are confined to a yard it is usually desirable to run from 12 to 15 females

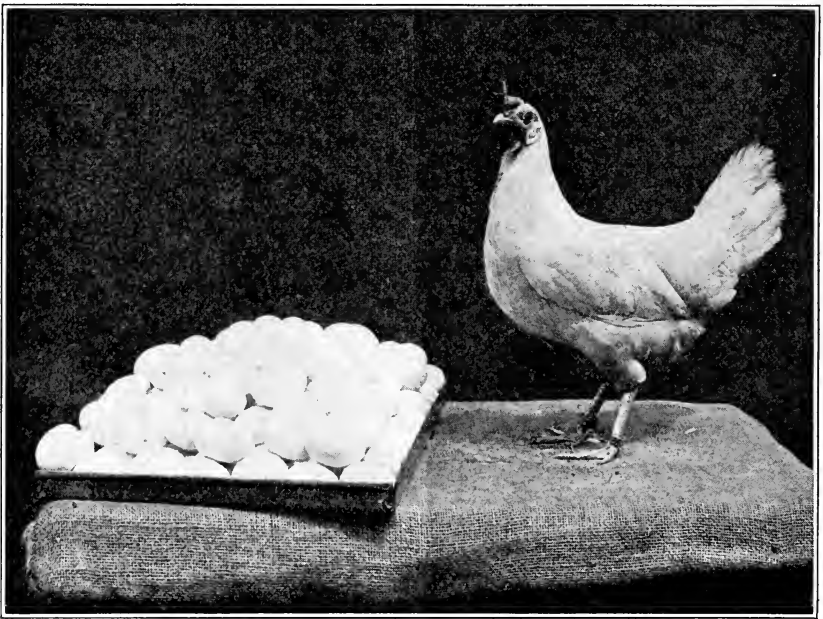


FIG. 3.—A good producer, having laid 160 eggs in a year.

of the smaller breeds, such as the Leghorn; from 10 to 12 females of the general-purpose breeds, such as the Plymouth Rock; and from 8 to 10 females of the heaviest breeds, such as the Brahma, with 1 male. Where the fowls have free range and the male is strong and vigorous, it is often possible to obtain fertile eggs with a considerably larger number of females to each male. A vigorous Plymouth Rock cockerel on free range should give good fertility when mated to 20 females, while a Leghorn male under similar conditions can be mated to 25 or 30 females, with good results. If eggs for hatching are desired from a flock too large for a single male to fertilize, two or more males can be run with it, either at the same time or preferably by alter-



ating the males on successive days. It is best, however, to use a mating small enough so that a single male can be used.

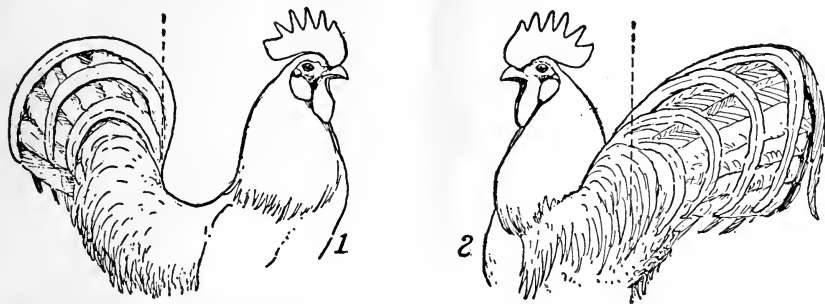


FIG. 4.—Males with defective tail carriage. Such defects should be guarded against in selecting breeders. 1, Tail carried too high; 2, tail carried to one side, called "wry tail."

**AGE OF BREEDING STOCK.**

Either pullets or hens and either cockerels or cocks can be used in the breeding flock. If cockerels or pullets are used, they must be well matured. Hens are better than pullets, as they lay larger eggs and

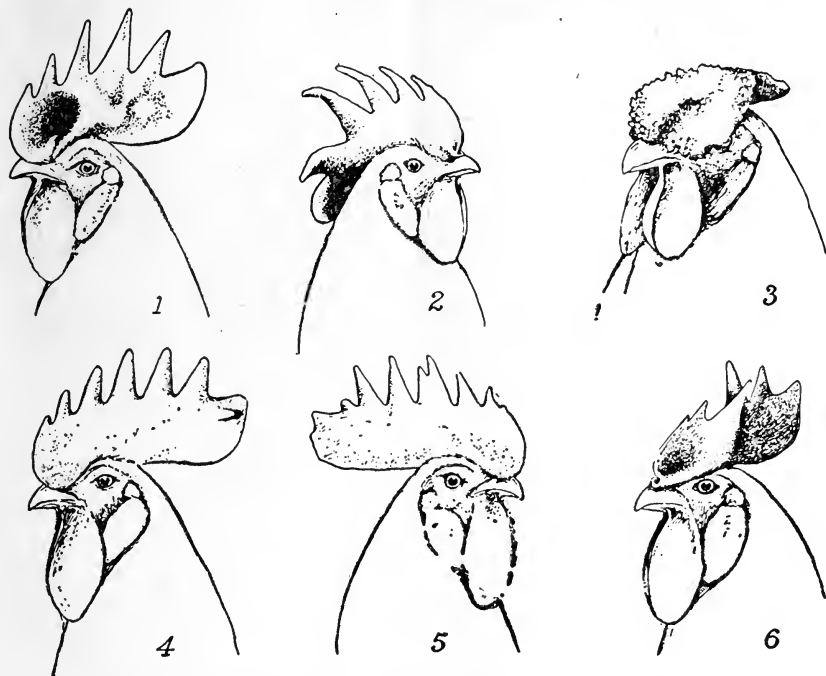


FIG. 5.—Male heads showing defective combs. Defects of these kinds should be guarded against in selecting breeders. 1, Thumb mark; 2, blade of comb following neck too closely and points showing tendency to lop; 3, rose comb showing hollow center; 4, side sprig; 5, uneven serrations and double point; 6, twisted comb.

give better fertility and stronger chicks. Yearling and 2-year-old hens are better than older hens. If pullets are used as breeders they should be mated with a cock rather than with a cockerel, while

if a cockerel is used he should be mated with hens rather than with pullets. As a rule, well-matured cockerels will give better fertility than cocks.

#### FREE RANGE FOR THE BREEDING PEN.

When possible, free range should be provided for the breeding stock. It is better to provide it during the entire fall and winter before the breeding season, but, if this is not possible, free range just preceding

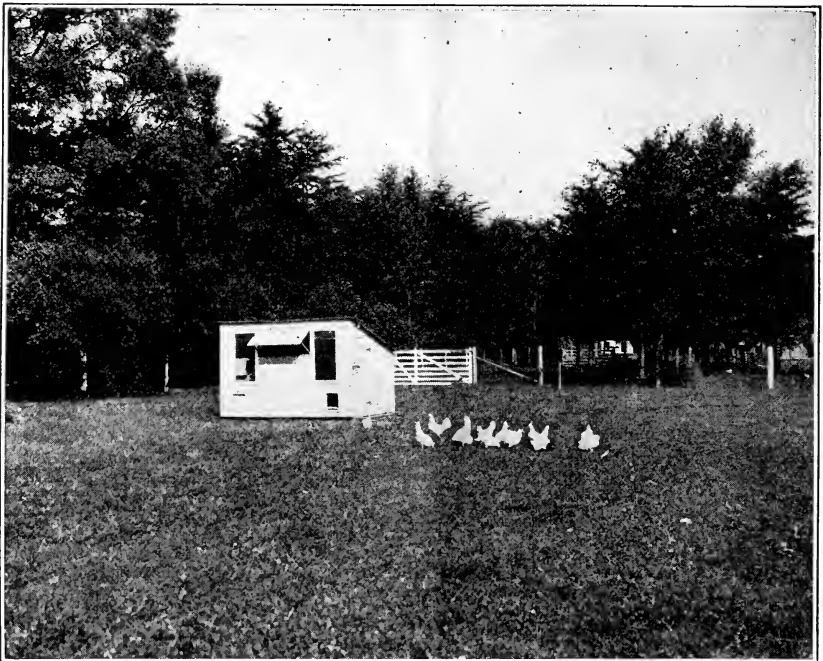


FIG. 6.—If possible the breeding pen should have free range.

and during the breeding season will be of great value. Birds on free range will get more exercise and therefore will be in better health and will give higher fertility, better hatches, and stronger chicks.

#### MAINTAINING FLOCK FERTILITY.

Watch the breeding flock carefully and see that the fowls keep in good breeding condition. The birds and the houses should be examined to see that they are not infested with lice or mites. Either of these pests in any numbers will seriously affect or totally destroy fertility. Care must also be exercised to see that the male does not frost his comb or wattles. If these are frosted his ability to fertilize eggs will be impaired and may not be recovered for several weeks. On very cold nights when there is danger of the combs being frosted

the males to be used as breeders must be placed where their combs will not freeze. This can be done by placing them in a box or a crate of suitable size partly covered by a bag or cloth. The breeding male should be examined occasionally after feeding to see that his crop is full and that he is not growing thin. Some males will allow the hens to eat all the feed, with the result that they get out of condition. If this happens the male must be fed separately from the hens at least once a day.

### **HOUSING BREEDING STOCK.**

The breeding stock must be provided with comfortable quarters. This means that the house must be draft proof yet well ventilated and dry. Room enough must be allowed so that the birds will not be crowded. If the birds are yarded, 4 square feet of floor space per bird should be allowed, but on free range from 3 to 3½ square feet per bird will be enough.

### **FEEDING BREEDING STOCK.**

The breeders must be fed so as to keep them in good condition and so that they will produce eggs. Any good laying ration is suitable for this purpose, but it should not be extremely forcing, or, in other words, should not have an extremely large proportion of beef scrap, not more than from 10 to 15 per cent of the total ration. The birds should be kept in good flesh but should not be allowed to become excessively fat. All whole or cracked grain should be fed in the litter so as to force the fowls to exercise by scratching for it. As a supply of green feed is usually lacking late in the winter or early in the spring, sprouted oats, cabbage, mangels, or cut clover or alfalfa should be fed to the fowls.

### **FARMERS' BULLETINS SPECIALLY USEFUL FOR MEMBERS OF BOYS' AND GIRLS' POULTRY CLUBS.**

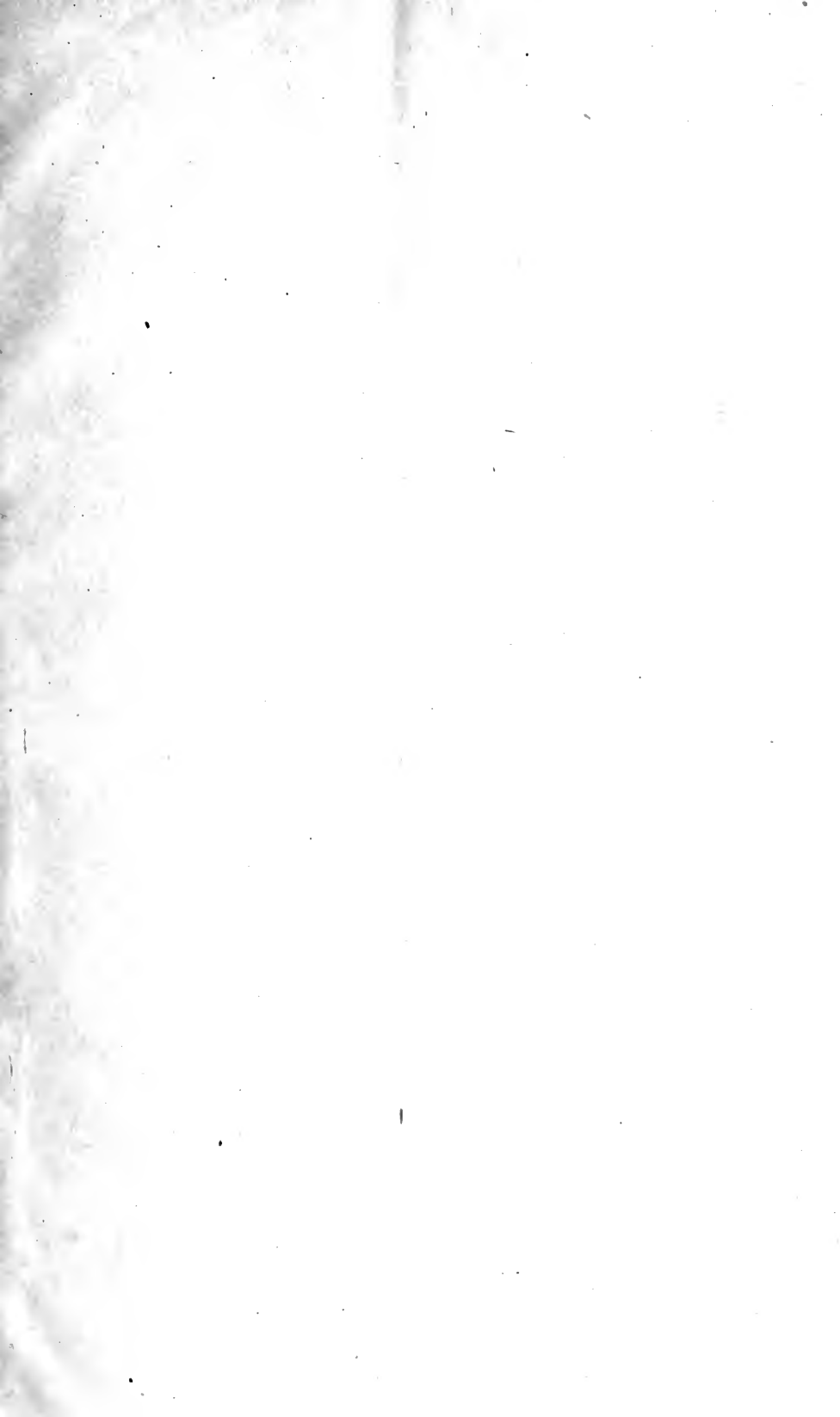
- 1105. Care of Mature Fowls.
- 1106. Incubation of Hens' Eggs.
- 1107. Brood Coops and Appliances.
- 1108. Care of Baby Chicks.
- 1109. Preserving Eggs.
- 1111. Management of Growing Chicks.
- 1112. Culling for Eggs and Market.
- 1113. Poultry Houses.
- 1114. Common Poultry Diseases.
- 1115. Selection and Preparation of Fowls for Exhibition.

### **OTHER FARMERS' BULLETINS ON POULTRY RAISING.**

- 287. Poultry Management.
- 528. Hints to Poultry Raisers.
- 574. Poultry House Construction.

- 585. Natural and Artificial Incubation of Hens' Eggs.
  - 624. Natural and Artificial Brooding of Chickens.
  - 682. A Simple Trap Nest for Poultry.
  - 656. The Community Egg Circle.
  - 684. Squab Raising.
  - 697. Duck Raising.
  - 767. Goose Raising.
  - 791. Turkey Raising.
  - 801. Mites and Lice on Poultry.
  - 806. Standard Varieties of Chickens: I. The American Class.
  - 830. Shipping Eggs by Parcel Post.
  - 849. Capons and Caponizing.
  - 858. The Guinea Fowl.
  - 889. Back-Yard Poultry Keeping.
  - 898. Standard Varieties of Chickens: II. The Mediterranean and Continental Classes.
  - 957. Important Poultry Diseases.
  - 1040. Illustrated Poultry Primer.
  - 1052. Standard Varieties of Chickens: III. The Asiatic, English, and French Classes.
  - 1067. Feeding Hens for Egg Production.
- Bureau of Chemistry Circular 61, revised, How to Kill and Bleed Market Poultry.

For copies of these bulletins or further information on poultry raising, write to your poultry-club leader, or to the Animal Husbandry Division, Bureau of Animal Industry, United States Department of Agriculture, Washington, D. C.





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