

The colour given above for legs and beak is for well-matured pullets. It will be found that good laying hens at this time of the year are pale in legs and beak, and have often a slight straw tinge in the feather.

Scale of Points.

Skull, beak, neck, face, and eyes	12
Comb, lobes, and wattles	10
Type and carriage	30
Tightness and density of feather	20
Legs and feet	3
Tail	5
Condition and size	10
Colour, including plumage, beak, eyes, face, feet, and lobes	10
Total	100

A study of the above scale of points will show that the chief characteristics to look for when selecting utility breeding birds are type and carriage and tightness and density of feather, for it will be seen that these characteristics are of sufficient importance to be given 50 points out of 100.

The full text of the standard has been given in order to assist the beginner, as, if he is to become a successful selector, he must first know the Standard requirements of the breed in which he wishes to specialize and have a definite model to guide him.

Figure 1 shows a good specimen of a utility White Leghorn pullet and the

class of bird that should do well at an egg-laying competition and then make a good breeder.

Figure 2 shows a fine specimen of a utility White Leghorn. The photograph was taken at the end of a heavy laying season, when the bird was about eighteen months old. This bird possesses all those visible characteristics of a good breeder, the chief of which are purity of blood, vigour and constitution, and capacity to produce and reproduce, and is a very useful guide for the beginner to take as a model when selecting Leghorn breeding hens.

—C. J. C. Cussen, Chief Poultry Instructor, Wellington.

Use of Phosphatic Guanos.

STRICTLY speaking, a "guano" should contain a small percentage of nitrogen, but owing to the climatic conditions existing where many of these deposits occur any nitrogenous content is leached out. One of the true guanos is Peruvian guano, which is found on the rainless islands off the coast of Peru. Similar deposits are also found off the coast of West Africa. Such guano contains about 10 per cent. of water-soluble nitrogen and about the same amount of insoluble phosphoric acid.

The phosphatic guanos come from deposits built up over many centuries and which now exist in the form of a brown soft, friable rock. The nitrogen content is under 1 per cent., and there are also present small amounts of lime. The principal sources of supply are the Seychelles Islands, in the Indian Ocean, and the neighbouring island of Juan de Nova, St. Pierre, and Astove. The brown product from these sources is in a fine state of subdivision and contains

25 per cent. to 27 per cent. of water-insoluble phosphoric acid.

Walpole Island, in French Caledonia, produces a soft guano containing about 20 per cent. of water-insoluble phosphoric acid and a certain amount of lime. Several other Pacific islands also produce guanos, but these are only imported occasionally.

Uses of Rock Phosphates.

The phosphate of rock phosphates is but slowly soluble in water, though it is more soluble in soil solution. There are no reliable tests for the availability of rock phosphates in the soil. Their fineness of division, the acidity of the soil, the presence of organic matter, and the presence of lime are all factors influencing availability, and the best advice that can be given to a farmer is that he undertake an experiment himself.

Rock phosphates are in all instances finely ground, and this is particularly true of guanos. Climatically, results

tend to show that they do better in high rainfall areas, where the soil has a fairly high moisture-retaining capacity. Recent trials at Marton indicate that though rock phosphate was inferior to slag and to super yet the margin was not very great, and as the trial progressed the difference was gradually being made up. Such a result gives food for thought. In the absence of any long-term experiments, it seems feasible to suppose that the slow-acting phosphate may, over a period of years, prove the equal of other forms of phosphate in replenishing the supply in the soil.

However, unless there is pronounced superiority it is not likely to oust either superphosphate or basic slag.

Rock phosphate is seldom used as a straight fertilizer, though this may possibly be a development of the future. Its principal use in agriculture to-day is in various crop mixtures where it supplies slow-acting phosphate and is not detrimental to germination.

Book Review.

"The Cultivation of Mushrooms."

By Dr. W. F. BEWLEY and J. HARNETT.

FIRST published in July, 1934, the present edition has been revised and enlarged by incorporating the results of the latest investigations and the liberal addition of illustrations. The treatment of the scientific and practical sides of the subject are well balanced,

so that it forms an excellent manual for the commercial grower.

There are still problems to be investigated, but available knowledge on all phases of the subject are supplied in a straightforward manner. Even cooking

recipes are included, the quality of which should make them excellent advertising for mushroom sales.

"The Cultivation of Mushrooms," edition 2, 95 pp., is published by the Anglo-Scottish Press, Ltd., price 3s. 6d. net.

—Wm. C. Hyde, Horticulturist.