

# THE CANADIAN POULTRY REVIEW

DEVOTED TO A PRACTICAL KNOWLEDGE OF POULTRY, IN ALL ITS BRANCHES.

PUBLISHED BY H. B. DONOVAN.

VOL. XVI.

118 VICTORIA STREET, TORONTO, JULY, 1893.

No. 7.

## NOTES AND COMMENTS

### DOMINION EXPERIMENTAL FARM REPORTS.

WE give in this issue the first instalment of Mr. A. G. Gilbert's valuable annual report. It seems a pity that such reports cannot be got up a little more elaborately, with well designed engravings and a separate pamphlet made up from the original matter and distributed broadcast amongst the farmers and breeders. In its present form it must of necessity reach but a limited number although the REVIEW has by printing extra copies of the issues containing this report done its little share to make the report more generally known. We commend some such plan for 1894 to Professor Saunders and the Dominion Government. Mr. Gilbert, we are sure, would be but too glad to co-operate in making his next report still more elaborate and instructing.

### THE REPORT OF THE CHEMIST.

In looking through the blue book we were struck with the amount of sound knowledge conveyed in the following few sentences from the it of the chemist, Mr. Frank T. Shutt, M.A., F.I.C., F.C.S. It will repay careful study especially in winter feeding and the rationing of growing chicks:

**Albuminoids.**—A collective name applied to the nitrogenous organic substances. They are the most valuable of all fodder constituents. They are essential to the formation of muscle, cartilage and the tissues generally, and of the animal fluids, blood and milk. Though their principal office is repairing waste and making new tissue, they also serve to develop heat and energy when fat and the carbohydrates are lacking or in insufficient quantities. Whether animals are laying on flesh, producing wool or milk, or working, a supply of albuminoids is necessary, and experience has shown that economic feeding chiefly consists in obtaining them at a minimum cost and feeding them in sufficient quantities.

**Fat.**—This ingredient has a high nutritive value, and in this respect ranks next to the albuminoids. By its combustion it generates the greater part of the heat of the body. Further, it is readily transformed into fatty tissue in the animal.

**Carbohydrates.**—Consist of sugars, starch, gums and allied substances, and form a large percentage of the organic matter of plants. They are readily assimilated and oxidized in the animal system, producing much heat and energy.

**Fibre.**—Compared with the constituents already discussed, fibre has a low nutritive value. It forms the woody parts of the stems and leaves of plants and of the hull or husk of seeds. As a rule the fibre becomes harder and less digestible as the plant approaches maturity.

**Ash or Mineral Matter.**—This contributes to the formation of bone and supplies the tissues throughout the body with the minute quantity of mineral matter they require. It also replaces those saline substances daily excreted.

The question of economic feeding is intimately related to that of maintaining and increasing the fertility of the soil. This becomes evident when we remember that the greater portion of the fertilizing elements (chiefly nitrogen, potash and phosphoric acid) of a food, are returned in the manure. It is for this reason that a ration with a high percentage of albuminoids gives a manure rich in nitrogen and *vice versa*. Unless manure or artificial fertilizers are bought, a large percentage of the produce should be fed on the farm. The soil may then be expected to yield lucrative crops and at the same time not deteriorate.

Again, economic and efficient feeding can only result from the application of a knowledge of the composition and feeding value of our principal fodders and a due consideration of their market prices, which latter it may be added is not always in accord with nutritive value. It is to afford this knowledge that during the past year some of the principal fodders, both "coarse" and "concentrated," have been examined in our laboratories.

### CONCENTRATED FODDERS.

Acting on the following values from the same report, will lead to an intelligent interpretation and practical working out of the foregoing paragraphs:

#### No. 1 OATS.

The percentage of hull, which in the case of the oat is consumed by the animal with the kernel, is usually from 30 to 35. Some difference in composition exists between the varieties of oats, chiefly due to the fact that the amount of the hull is dependent largely upon the variety. The less hull, the higher the albuminoids. Compared with the other