

practically all branches of the industry, and to which these *Journal* seasonal notes are supplementary. This bulletin may be obtained from the Publisher, Department of Agriculture, Wellington, at a cost of 1s.

HATCHING WITH HENS.

Those who are hatching with hens should take care to have ample provision for cosy coops and runs for the chicks. The coops should be placed on dry ground, and made in such a way that the mother and her brood will be protected from rain and cold winds. It is also essential that they be made cat and rat proof; neglect of this provision means heavy losses of chickens each season. In making the nest take a shallow box about 6 in. deep and 15 in. square, remove the bottom, and place on the ground. Half fill it with moist earth, and shape the nest with the hands so that the eggs will have a tendency to remain in the centre; in other words, make it saucer-shaped, care being taken that it is flat on the bottom to enable the hen to turn the eggs, which she does several times a day. Neglect in this direction is a common cause of eggs being broken in the nest. The nest should be lined with a thin layer of hay, fine straw, &c.

Place the hen on a few china eggs until satisfied that she can be entrusted with the eggs intended for incubation. Before the hen is placed on the nest give her a good dusting with carbolic or other insect-powder in order to destroy any vermin that may be on her. More trouble and loss are occasioned by vermin in the rearing of chickens under hens than by anything else. Do not meddle too much with the hen when she is hatching. She can attend better to her natural business than you can, but as she is not carrying out her work in a state of nature her requirements must be considered. The application of moisture to the eggs is a case in point. Sometimes the air-cell dries down to such an extent that the thin membrane inside the shell becomes so tough that the chicken is unable to pierce it and consequently dies of suffocation. Here nature may be assisted by providing moisture. The best means is to take the hen off, lift up the nesting-material, and give the earth underneath a good moistening. This is preferable to sprinkling moisture on the eggs or dipping in water. The object should be not to wet the eggs, but by applying the submoisture to encourage, by means of a hen's body, a humidity in the air surrounding the eggs.

When the chicks are moved to the coop, which should be constructed in such a way that plenty of fresh air and light are provided, both the hen and the chickens should be enclosed for the first two or three days. Then provision should be made whereby the chickens can run in and out in order to afford them exercise. It is always a mistake to allow a hen with a young brood a free range. When the sitting-hen is confined in a box she should be let off once a day to feed, drink, and dust herself. It is, however, much better for her if she is placed in a coop with a roomy run attached; she can then have before her at all times everything she requires, thereby minimizing the time required for attending to her. Hard grains, clean water, and grit are all the food that a sitting-hen needs.

—F. C. Brown, Chief Poultry Instructor.

THE APIARY.

FOUL-BROOD.

It is evident from opinions expressed by many beekeepers in reference to foul-brood that the highly infectious nature of the disease is not fully understood. In a bulletin on the subject, written by Dr. C. F. White, specialist in insect diseases, and issued by the United States Department of Agriculture, is given a brief summary of the facts known about American foul-brood (the form present in this country), together with a few conclusions, which may be usefully quoted here, as follows:—

"American foul-brood is an infectious disease of the brood of bees caused by *Bacillus larvæ*.

"All larvæ—worker, drone, and queen—are susceptible to the infection; adult bees are not.

"The brood of bees can be infected through feeding the spores of the bacillus to a colony.