

The difficulties of the large growers are mainly due to bad housing, yarding, and feeding. Many houses are poorly ventilated, and the yards are small, and the fowls are on them constantly, and are, therefore, in an unsanitary condition; and, furthermore, the lack of a variety of foods and exercise, and the use of animal foods, are also more or less injurious. All these conditions are largely under our control, and many of the failures in the past appear to be directly due to a too intensified condition. It has been many people's idea to see how many hundreds could be kept on the least acreage of land.

NATURAL AND ARTIFICIAL INCUBATION.

Whether it will pay to buy incubators and brooders depends largely on one's circumstances. Where chicks are wanted in considerable numbers earlier than April 15th, an incubator becomes practically a necessity, as it is seldom that hens become broody in numbers until after the 1st of April. Again, where one wishes to hatch more than 150 chicks, an incubator is in many cases cheaper and better than the natural methods. It is also a necessity where one is breeding from the non-setting varieties.

There are numerous illustrations of chicks being raised in large numbers by the natural method in the States of Rhode Island and Massachusetts, particularly in the former State. Where this method is followed, the chicks are hatched largely during the months of May and June; and where from 500 to 1,500 laying hens are kept, there is little difficulty in getting a sufficient number of broody hens. Those who are keeping large numbers of hens appear to be well satisfied with the natural method; but there can be no doubt that the number of incubators in use is increasing from year to year.

The average hatch is probably one chicken from every two eggs set. This, of course, varies with the different seasons, also with the percentage of fertile eggs, and the strength of the germ. We have found during the months of February and March, when the ground is covered with snow and the fowls are closely housed, that the percentage of fertile eggs is small, and that the germs are very weak. Under such conditions we have very poor hatches and chicks that are very hard to rear. Much better eggs are obtained in December and early January, or when the fowls get out into the fresh air and are able to pick some grass. Thus it will be seen that, as a general rule, as the percentage of fertile eggs increases, the vitality of the germ increases, the percentage hatched is larger and the mortality among the young chicks smaller. For example, we would expect to get a much larger percentage hatch of the fertile eggs from eggs that were 90 per cent. fertile than from those that were 60 per cent. fertile; and, moreover, we would figure on raising a much larger percentage of chicks from the former eggs than from the latter, owing to the chicks being stronger and having greater vitality.

Setting the Hen.—It is generally agreed that, in order to secure a good hatch, the hen must be placed where other hens are not likely to