

winters to a small extent, and has been received with favor in the markets, although it has been sold at a high price—viz, three dollars per head.

But whether the large Belgian rabbit or the English hare be chosen, the management would be the same. A large enclosure would be required, not less than ten acres, surrounded by a safe, tight fence, to keep them in and the dogs out. A piece of rough woodland, with plenty of low-growing underbrush and ferns, would be needed, to furnish cover and breeding places, and a grass field or pasture properly provided with acceptable food, with some ground for crops of various roots. A useful improvement upon nature would be to provide dry coops, and distribute these about the preserve for the use of the young litters.

The food of the rabbits and hares consists of clover, grass, tares, pea-vines, cabbage, turnips, both young and in the root; celery, parsley, lettuce, carrots, beets and mangels. A small patch sown to wheat would furnish useful food in the late fall and early spring; while the cabbage, turnips, celery and carrots, with some bran, would provide acceptable food for the winter. A little salt is necessary for the health and these animals are exceedingly fond of it; so much so that it is used as the best of all baits for enticing them into traps.

It would certainly be best to keep only the pure breeds, and not attempt to cross them with our small wild rabbits. These are too small and cheap for profit, and would cost more than they would be worth to get a stock of them alive. I have often thought of the advantages of introducing the English hare for breeding and feeding for market, or else our own northern hare, which is quite as large, but being native to the soil would not be as popular and profitable as the foreign hare or rabbit. This English hare would be a valuable acquisition to our stock of food animals, as it provides the material for a large number and variety of most toothsome dishes, the cookery books having not less than twenty different ways of preparing this animal for the table, and in every one the peculiar tenderness and gamy flavor of the flesh make it most desirable. It is estimated that 50 of these hares and about 100 of the Belgian rabbits can be kept the year round on an acre of ground. More can be kept, of course, if a winter supply of vegetables and roots is provided, for a pound of roots and cabbage heart, with two ounces of bran, will afford abundant provision for a hare or for two rabbits, but a change of ground and a yearly plowing will be necessary to preserve cleanliness. They could be kept much more easily in the South, where the ground is free from deep snows, than in the North, although our native hare is an inhabitant of the most northern States, and is exceedingly abundant in Canada and the northern lake regions, where I have seen the swampy thickets trodden hard by their countless numbers, and have known over 100 taken in snares in a night by one trapper. But the southern winter climate is so much like that of England and the north of Europe, Belgium especially, that the animals would be wholly at home there as far as climate and natural food are concerned.

H. STEWART.

Highlands, N. C.

CROSS BREEDING.

EDS. COUNTRY GENTLEMAN.—It has been found from long experience, and of the fact there is really no doubt, that for the poultry-keeper, whose object is profit, judicious crossing is a decided advantage to his pocket, in that it assists the securing of a better result from his venture than if he restricted himself to pure breeds alone. The reason of this is not far to seek, for the tendency of all pure bred fowls, that are at all carefully bred, is to improve in mere outward characteristics at the expense of inward qualities. And this tendency must certainly be combated if success has to be attained. In

my remarks on the Houdan fowl I mentioned that French poultry breeders have managed to preserve the characteristics of their fowls, and at the same time maintain, if not improve, the economic qualities; but it is to be noted that they place the latter first. This must not be taken to mean that they neglect the outward characteristics, but that they do not make the improvement of these their chief aim, regardless of what the effect may be in other ways. They know that birds which have special outward characteristics are best, either as layers or on the table, and thus they look out for these points and breed for them. But they give the points a much greater breadth of meaning than do English fanciers, and in judging they go upon a different plan to that followed here. In an English show, the judge regards as all important, shape, size, color, comb legs, and general contour, and does not seem to care whether the birds are likely to make good table fowls or first rate layers. Across the English channel the judging is exactly reversed. The points which denote economic qualities are looked for first of all, and then an examination is made for the externals. At the great Paris show I have seen good looking La Flèche thrown because they were rather coarse in comb, a fine comb being regarded as the sign of a fine fleshed table fowl. A Crève with white feathers is there thrown out as in an English show, this being thought a sign of impurity. But the crest is not allowed to settle matters entirely, as is too often the case here, the result of which is seen in the diminished size of the fowls and their lessened fecundity.

From what I have stated it will be seen that the system of breeding adopted in England—that is, among those who go in for keeping show fowls—is to place first those qualities that are of the lesser importance, and hence, it is that we find a deterioration in profitable qualities among so many of our varieties. Crossing very largely remedies this, for it is found that first crosses between suitable breeds at once gives us hardier and more prolific birds than were either of the parents. This crossing, strange to say, is only beneficial between two pure breeds when it is the first cross, and if persisted in afterward soon results in injury to the whole stock. A pure-bred cock introduced into a lot of mongrels will improve them, but a bird so introduced that is himself a cross will not have nearly so much influence. This fact needs to be repeated continually, for farmers and others seem very slow to realize it. The thing is, however, self-evident to all who have in any way tested the question, and it is this fact which accounts for the poor, miserable specimens that we see in so many farm yards. These have generally been crossed for years without thought or reason, except, that, perhaps, a new cock has been introduced now and then, just as fancy dictated—sometimes a Brahma, now a Cochin, then a Game, and so on until the produce is a real mixed up lot, and the cleverest ornithologist would be puzzled to tell what breeds had been concerned in the business.

These results, as seen in too many farm yards, show that while judicious crossing is undoubtedly beneficial, without proper consideration it is positively injurious, and does more harm than good. For instance, a Brahma has a large frame, fairly good meat—though this meat is not in the right place—is a moderate layer, and a good mother. To cross it with a Cochin, which is as large in frame, and something of the same shape and type, would at once injure the quality of the flesh, and impair the productiveness as layers of eggs, and do no good so far as the size is concerned, only improving in one point, if that be an improvement, namely, in the sitting quality. Leghorns and Minorcas are good layers, small eaters, non-sitters, and being essentially laying fowls, are only moderate in quality of flesh. To cross these with Game would certainly improve the quality of the flesh, but it would at the