

breeds. Few, if any, breeds of stock have reached a point where further improvement is not possible, but the greater the perfection the more difficult the improvement. Our breeds of poultry have been developed to a point of great perfection in form and plumage, but how much yet remains to be done in the way of egg production? As the profit from goose breeding is almost wholly in the number and market value of the young birds produced, the quality of large egg-production is an all-important one. As has been mentioned on a previous page, this quality is affected by the care and feeding, and may be increased by attention to the selection of both ganders and geese from noted egg laying strains. This is only possible by keeping an accurate record of the eggs laid by individuals in the flock, and how few goose breeders do this? The tendency to rapid growth and early maturity, combined with good size and a small proportion of bone and offal, should be given the attention which their importance demands. There is abundant opportunity for those interested in breeding pure bred geese to develop their stock along the lines indicated, and make for themselves a reputation which will bring its pecuniary reward, for the pure breeds will ever be the source from which those who wish to grow the most profitable market birds must obtain their stock.

As improvement must come through the selection of the best, and the constant culling out of those not up to a high standard of perfection, some means for the identification of individuals is necessary. The small breeder can readily distinguish each one by some characteristic, but even then it is well to have some permanent record which will serve to identify each member of the flock.

MARKING.

Metal leg bands of various forms and sizes can be readily obtained already stamped with numbers, and one can easily be fastened around the leg of a goose; and a record made of the number. Geese, however, frequently lose these metal bands, and it is generally safer to have a more permanent mark made by punching the web of one or both feet. For this purpose a belt or harness-maker's punch is used, cutting a hole about one-fourth inch in diameter, which does not so readily grow up as a smaller one. In punching the web of the foot a piece of firm sole leather is placed against the web, on the under side, to serve as a

cushion for the cutting tube, and enable the operator to cut a smooth, round hole, with little pain or inconvenience to the goose. By holding the foot to the light the position of the principal blood-vessels can be readily seen and avoided in punching the web. Very little blood, however, is lost at any time, and the cut quickly heals. In fact the hole will often be completely closed by new growth, but a slightly thickened and perfectly smooth skin will cover the spot, so that the mark is permanent even if the hole closes up. Marked as above, geese are easily identified at any time, and when one attempts to keep individual records some such method of marking is indispensable.

CROSS BREEDING.

This term has sometimes been employed to define the use of a pure bred male upon females of mixed and uncertain breeding, the progeny of which is properly called a "grade," and continued use of males from the same pure breed with grades so produced is called grading up. When wisely done, such a method is productive of excellent results at a very moderate cost. The use of pure bred sires from beef breeds in the herds of cattle on our western plains is a good illustration. Steers now get their growth and are ready for market at least a year younger than formerly, and furnish many more pounds of meat in the higher priced cuts in proportion to total weight. But a strict definition of the term "cross breeding" confines it to the mating of animals of distinct breeds, and therefore does not properly include such a course of breeding as has just been described and termed "grading up." The advantage of cross breeding lies in the fact that a first cross appears to possess characteristics which give it an advantage over either of the pure breeds from which it was derived. Warfield says: "It has been well settled that such crosses are very fruitful in vigor and vitality." This means a strong constitution and good appetite, which go far toward making a profitable animal. At various fat stock shows the honors have been repeatedly secured by cross-bred animals, or the progeny of very high grades of one breed bred to another pure breed. Prizes so obtained testify to the ability of the cross-bred to make a greater gain in weight in a less number of days than the pure bred. The good effect of crossing does not, as a rule, however, extend beyond the first cross, for when bred together general deterioration rapidly takes place.

(TO BE CONTINUED).