

soon as the lambs will eat, a liberal supply of oil cake should be given them; to this may profitably be added cracked peas and a sprinkling of wheat bran.

The ewes and lambs should have an abundant supply of good, fresh water and the pen kept clean and well bedded. A judicious use of new milk from a fresh cow will hurry the poorly-fed twins along quickly to market.

### Poultry-Yard.

"What shall be do with our broody hens?" is a puzzle for poultry-keepers. All kinds of cruelties are practised by ignorant people with the vain idea of getting rid of a hen's natural desire to sit. Whirling the bird round until she becomes giddy, keeping food from her, and even throwing cold water over her are practices as useless as they are cruel; a good hen will sit in spite of these. The best plan is to remove her to a place with which she is not acquainted, and where a nest is not easily made. The common way of dealing with broody hens is to cast them all together into a coop; the floor being hard, they cannot scoop out the semblance of a nest, and, even were this a possible achievement, the hens, being numerous, would drive one another from a stationary position. Throwing broody hens from their nests is an ill advised proceeding, as of course they are easily scared when wanted to sit. I cannot recommend, as some do, a free permission to the hens to sit as long as they like on nothing at certain seasons. I have never discovered the utility, but have seen often the bad effects of protracted sitting or incubation. It does not afford the rest and after-invigoration that some writers claim for it, though the natural period of three weeks undoubtedly, like a barrister's fee, acts as a "refreshment." If so beneficial, why is not a protracted sitting necessary for Minorcas, which lay so many and such large eggs, and yet scarcely ever desire to sit? If poultry-keepers would only remember the nuisance and inconvenience of having no broody hens in the early part of the year, they would put up more readily with the annoyance of broody hens when sitting is not to be encouraged. To sell broody hens is not fair to the purchaser of poultry, who thus buys a fowl under most disadvantageous conditions. My advice is to keep the good sitters and to sell off the wild, uncertain hens at a time when neither nesting nor moulting will injure them for the table. Eggs are cheap now; consequently this is the time for pickling. The vendors of an egg at a shilling have had their day, as fancy poultry must be hatched early, and though the practical poultry keeper may still be hatching out for some weeks to come, even he is not wanting so many broods when June is over, and so he has an extra quantity of eggs to sell. Eightpence the dozen is an unsatisfactory price when we consider that the same eggs pickled, at no cost and little trouble, may be worth eighteenpence at Christmas.

Perhaps this may be the most suitable time for me to say a word about 'gapes,' as they have made an appearance. I have nothing new to advise, only the old remedies, which for over forty years I have found most successful. I shall not recommend any expensive apparatus; as I have stated before, a stable bucket, a cloth to cover it, and a pipe with tobacco will suffice, though I prefer a box in which is inserted a small pane of glass; then

we have only to place a dozen affected chickens in this box, blow the tobacco fumes into them through a hole or short tube, and when a stirring of feet and a clicking of throat is heard, look through the glass, and, directly some are seen to be overcome and full, to turn them all out. (1) They soon recover, but an extra stay may prove fatal to the whole batch. In the more expensive arrangement carbolic fumes are employed and various kinds of highly-finished boxes. If properly treated the chickens cannot stand long against tobacco, neither can the worms located in the windpipe, and so by a succession of "clicks" they are cast up. Gapes are anyhow a troublesome disease, and hinder the growth of young birds vastly. Dorkings suffer as much, if not more, than other kinds. As with the human subject all kinds of other disease follow upon a bad attack of influenza, so atrophy and other ailments often trouble and kill a chicken reduced by gapes. Onion chopped and mixed with meal I still believe in as a possible preventive, but change from an affected run is the more efficacious. One word about eggs, as I see this week an amusing allusion to them in a law court. It appears that at Covent Garden Market the practice is, in the case of fruit from abroad, to sell on the understanding that buyers should sort and destroy the unsound portion. The arguments drifted away to French eggs, and the difficulties of those who retail them—what shall they do with their eggs if not sold within a fortnight? This brought on a specification of some of the uses to which bad or doubtful eggs are applied; for the feeding of young pheasants, for confectionery, and for photography bad eggs are represented to be as good or better than sound eggs. The photographer may perchance play a winning card if he should photograph some unhappy victim who had just feasted on rotten egg, but why do not buyers in England buy good eggs laid in England, and not bad eggs manufactured between some foreign country and their own. W. J. P.

### WHOLESALE DUCK RAISING.

EDS. COUNTRY GENTLEMAN—In connection with a letter which appeared in your issue of April 5 (p. 269), by F. E. Dawley, some account of the duck raising industry met with in the counties of Buckinghamshire and Bedfordshire will prove of interest. For a long period of time the Vale of Aylesbury and the district around has been noted as the special centre of this industry, but of late years it has moved somewhat, and is by no means confined to the Vale; in fact, probably the greater portion of the ducks produced in the spring of the year are raised outside that district. A few days ago I had the opportunity of visiting the chief centre, namely, Leighton Buzzard, around which there are a large number of farms devoted chiefly to this pursuit, although in every instance it is by no means the only occupation. One farmer we visited has about 168 acres in all, and though he marketed last year something like 10,000 ducklings his attention is given all around. Others are fruit dealers, in some cases pig breeders, while during the spring of the year they have little else to occupy their attention than the care of the ducks. The chief station from which the ducks are conveyed to market is Stanbridge, between Leighton Buzzard

(1) We tried this 50 years ago and it is a perfect cure.—Ed.

and Dunstable, and it is estimated that from 30,000 to 40,000 birds are forwarded every year from this one place.

It is not necessary that we should detail the places visited, but a few general observations will describe the method of culture. We may say, however, that the chief centres are Stanbridge, Eaton Bray and Great Billington, that the duck rearers are by no means confined to one class, both farmers and cottagers sharing the work. One cottager we called upon whose occupation does not exceed one-fourth of an acre kills 1,800 to 1,900 birds every year. Another breeder, who has rather better shed accommodation and more land, had 2,000 ducklings of various ages from one day old to six or seven weeks and kills something like 6,000 a year. At the time of our visit he had between 200 and 300 hens sitting, chiefly in wooden boxes. The third, who has only recently started the business, being a young man, is now killing about 2,000 a year, while the largest kills annually 8,000 to 10,000. This however, is the large farmer to whom reference has already been made. Almost without exception the smaller breeders keep no ducks, or at any rate very few, purchasing eggs from the farmers all around the district, who find this a profitable part of their live stock. Contracts are usually made between the "duckers" and farmers for a supply of eggs right through the winter, and the average price is from 3s. to 3s. 6d. per doz, but during periods of scarcity 10s. 12s. per doz. is often paid, and we were informed by one breeder that he has paid as high as 15s. per doz. The eggs are set almost entirely under hens, and when the ducklings come out they are allowed to remain with the hen for about a week, kept in small coops. Then they are removed, placed in roomy sheds, which are usually divided into compartments. In one place a single shed had upwards of 2,000 ducklings in it, divided into flocks of about 25 each by L-shaped boards, so as to prevent overcrowding. As they grow these places are increased in size, and then they are put out into open runs with sheds attached, from 100 to 200 in a flock. On the largest farm visited there were two long low sheds divided by 18 inch boards into a dozen compartments, each of which held 100 birds. The ducks are allowed out when younger three times a day for feeding, at 7 A. M., 12.30 and 5 P. M., then put back and penned off in the manner stated. They are not given any water for swimming as a rule, but there are exceptions to this arrangement. Water for drinking is given in troughs, which are half filled with a special gravel brought from Long Marston in Buckinghamshire, and which seems to have some special qualities to recommend it. It is inexpensive, costing 1s. 6d. per load without cartage.

The food is of course varied a little in accordance with the individual ideas of the breeders, but as a rule the first consists of hard-boiled eggs chopped fine and mixed with bread crumbs, but some of the breeders use at this period in addition toast soaked in water. After three or four days of this feeding they are put upon rice, which is properly boiled, and for this purpose Burmah rice is preferred, and it has more feeding in it. Next they are given rice and toppings, which latter is a local name for fine sharps or middlings. During the latter stages of the process they are fed upon barley meal and fine graves or tallow scrap cake, though on one farm we saw that horse flesh and mutton were used for the same purpose. It is customary to give

boiled nettles mixed with the food at various stages of their growth, this having been found most helpful in keeping the blood cool.

As might be expected in such wholesale conditions, deaths are by no means infrequent, and there is in this respect a good deal of difference in accordance with the seasons; but we were informed by one who feeds very largely that upon an average he was enabled to market 85 per cent. of the ducklings hatched, which seems to be an excellent proportion.

The birds grow very rapidly, and what are known as ducklings, that is birds killed before they have cast their first feathers, are ready for market in about from seven to eight weeks, when they weigh from 4 to 5 lb. There is, however, a number kept until 14 or 15 weeks, when it is no uncommon thing for them to scale nearly twice that weight. The season lasts from February to July, that is when game is out of season, and a visit to the district after June would show that it was almost entirely denuded of ducks, save those retained for breeding purposes. The prices obtained vary in accordance with the season, and the following are average prices for well-grown birds: January, 10s. per couple; February, 16s.; March, 14s.; April, 22s.; May, 8s., and June, 7s. The kind of bred here without exception, is that known as the Aylesbury no other equalling it for rapid growth and flesh properties.

Carefully looking round the district, it is evident that an infusion of fresh blood is needed, the people here having that weakness which is found in so many places of neglecting this consideration. The one trouble which appears to affect ducks during the early stages of growth, is that known as soft bill, and when very bad sometimes the birds cannot break the shell. This is we think due to in-and-in-breeding, and can be obviated by attention to this point, and also by the use of more mature stock. That the industry is a profitable one can hardly be doubted when we see the people who carry it on. There is no special reason why it should be restricted to this one district; there are many other parts equally suitable if the same conditions are regarded. It is a most interesting sight to see great numbers of these pretty little balls of fluff with yellow down and light flesh colored bills.

STEPHEN BEALE.

H.—England.

### The Farm.

#### CROP ROTATION AND STEADY FARMING.

Much has been written on this subject, yet many cases have been within my observation in the past, and are before me at the present time, which go to prove that farmers many times disregard the fact (either from carelessness or ignorance) that to do otherwise than continue a regular rotation of crops and farm steadily is to impoverish their lands and bring calamity on their own heads. The cry "it don't pay," before giving an impartial and intelligent trial to some particular branch of farming, kills many a man as a successful farmer. Last season, and at present with the high price of hay, many will continue to mow the same fields five or six years, until the seeding is run out and the land exhausted. The result will be that the price of hay will go down—