

## The Dairy.

### A Cheshire Dairy Farm.

MR. HAROLD LITTLEDALE, of Liverpool, owns a large extent of land near Seacombe, on the western side of Birkenhead, and some hundreds of acres of his property near his house he farms. His farm includes 500 acres of arable land and 150 acres of poor grass land. The five-course rotation is adopted, viz: 1st and 2nd years, Italian ray-grass; 3rd, oats; 4th, green crops, as turnips, potatoes, mangel wurzel; and 5th, wheat. The green crops, together with large purchases of grain and cattle food, go to the maintenance of a large herd of dairy cows.

Ninety of the finest Yorkshire large-framed productive cows were standing in the stalls at the time of our visit, and about 1,000 quarts of milk are daily taken from them. From 800 to 1,000 quarts a day are the usual produce, 200 gallons being sold daily in the neighbourhood, and the remainder being churned.

The buildings—a remarkably well-arranged, commodious and neatly-kept homestead—have been erected with a view mainly to the accommodation of a large dairy stock. Four parallel ranges of buildings—three of them byres—abut on a cross range of higher buildings, at the back of which are threshing barn and machinery for grinding corn, cutting chaff, churning, &c. There is ample accommodation, both for housing the live stock, and dealing with the produce of the farm, and the apparatus includes mill-stones, threshing machine with conical drum, chaff-cutters, corn and cake crushers, churns.

The cows, milked at 4 a. m. and 3.30 p. m. are fed at 7 a. m., 1 p. m., 5 p. m., and 6 p. m., on hay, grains, turnips, mangels, and hay chaff. A good bull is kept, and the best cows are kept on and calved on the premises. Many, however, are every year sold off, and others bought in their places, to keep up the supply of milk. They are generally bought in at their prime, four or five years old, and kept two or three years before being disposed of. The pleuro pneumonia has made frightful havoc in the herd on four several occasions during the past twenty years, more than 100 having been lost in this way at different times. When the supply of milk exceeds the sale a considerable remainder exists, which is set in earthen vessels for butter. The churning takes place when the milk is two or three days old, in an upright cylindrical churn with two sets of beaters, one projecting from the upright central axis, and the other from the inner surface of the cylinder.

The management of the herd is in the hands of four men and four women, who see to the feeding, cleaning, and milking. The whole waste of the cow house goes into two large tanks, 60 feet by 13 feet, and 10 feet deep, and is thence pumped over the Italian ray-grass. A 4-horse power engine drives this through a 3-inch pipe and hose over the Italian ray-grass at 200 to 1,000 yards distance. It lowers the tank about 8 inches in an hour, and gets over 4 or 5 acres in a day of 10 hours. This is equal to about 60 tons of liquid applied per acre, which is a pretty fair dressing. Sixty acres of first year, and as much of 2-year old Italian ray-grass thus treated are cut generally four times a year, and provide capital summer feeding for the cows. The ray-grass is sown in autumn, after a thorough tillage and good manuring of the wheat stubble; it remains down two years and is ploughed up for oats. Very heavy crops of grain are obtained.

The mangel wurzels were the finest we have this year seen. The Italian ray-grass, in early July, was promising well for the second cutting, and the wheat and oat crops were looking like more than 5 and 10 quarters per acre. Rent, wages and taxes are all extremely high, as the neighbourhood of a large town would make them. We have nowhere seen cleaner, neater management, either in the field or in the farmery. Liscard is a capital specimen of vigorous suburban agriculture, under the direction of Mr. Littledale's farm manager.—*Agricultural Gazette*.

### Fall Feed for Cows.

It's of no use to think of keeping up the quantity and quality of our butter, if we neglect the fall feeding of our cows. When the grass has been bitten by the frost several times, it loses its sweetness and its substance. There may be enough in bulk, but the animals do not like it as well, and it does not make as much milk or fatness. The pasture feed must be gradually supplemented by fodder. And we can well afford to go to the trouble and expense of it, for butter sells at very remunerative prices. Corn stalks not yet dry will generally be eaten up clean, and a few thrown out morning and night are not only relished, but have a direct and marked effect on the

milk product. Sweet apples especially, if fed in reasonable quantities, are good; but do not let the cows have the run of the orchard. Pumpkins are first rate, a few at a time, twice a day, with all the seeds removed. Cabbage leaves, beet and turnip and carrot tops, and such like garden refuse, are excellent. A little dry hay may be also given to advantage, feeding out only what will be eaten up clean. A few pints of bran or corn meal, or a few ears of soft corn, or some oil meal may be fed daily. Yet the change from simple pasturage to this extra feed should be made gradually. All acknowledge the importance of this carefulness in spring when passing from dry feed to grass. There should be similar care exercised in the fall, or the yield of milk will fall off. Cows or sheep that are in good flesh, not to say fat, at the beginning of cold weather are half wintered. Just now it is that feed tells best. The fresh bracing air gives an appetite; the annoyance of heat and flies does no wear off the flesh; animals can feed all day and sleep all night, and the weather is not cold enough to make it necessary to consume much of the food or of the fat, to keep up the animal heat.—*American Agriculturist*.



### The Apiary.

#### Burying Bees.

We extract the following from the correspondence of the *Rural New Yorker* :—

"Being requested by 'A. B. C.' of Westfield, in your paper, to give my plan of burying bees, I will say that I have been in the practice of burying my bees in winter for several years, and have varied somewhat every year. But as reference was made in my note in your paper, of June 18th, to my success last winter I will give the plan then adopted. Selecting a dry piece of ground, I dig a trench one foot deep, one and a half wide, and twenty-four feet long. The trench is endwise to and near a ditch that carries water from my garden; and from the trench I made a small underdrain to carry off any water that might collect in the trench. Across this trench I place sticks of timber, in four or five places; on top of these, lengthwise the ditch, put four twelve feet planks, two and two, the top of the plank being about six inches above the ground. On these planks I arranged my hives, twenty-nine in all, in two rows, leaving the passage holes all open in the hives below, and supers or caps (as I use Miner's and Langstroth's) raised, so as to allow dampness or water to pass off if any collects; then to cover them, I set three posts or crutches, one at each end of the trench, and one in the middle, about four feet high, in which I put a ridge pole. From the ridge pole to the ground place rafters, a sufficient slant to clear the hive, and on them put layers similar to roof boarding for building. At the end of the roof drive stakes one foot from the end of the boards, and set up two tier of boards, one against the roof and the other against the stakes, as high as the peak, and fill between with earth. Cover the roof with straw sufficient to keep the earth from washing through when wet; cover with earth about one foot.

I put two ventilators, one and a half inches in the clear—one near the bottom and the other in the opposite end near the peak. In the coldest weather these ventilators would be filled with frost, which I usually cleared out. They should be arranged so as not to convey light to the bees. I have not generally used ventilators, but think it best. One winter I put thirty-six swarms in one pit without using any ventilators, and they came out well. With the experience I have had I am satisfied that in this northern latitude it is much the best way to winter the little fellows in a place where they can be kept dry, still, moderately cool, and entirely in the dark."

To DESTROY BEE MORNS.—Take a pan of oil or grease at the time the miller is ready to begin to lay its eggs, and insert a wick in the middle of it, and light about dark, set it near your bee-hives, and the millers will be attracted to the light, and being blinded by it, will readily drop in the grease and die.

## Sheep Husbandry.

### The Cotswolds.

THIS valuable breed of sheep derives its name from the locality in which it originated, the Cotswold hills, in the county of Gloucester, a calcareous group of moderate elevation in Gloucestershire, formerly a part of the great Oolite formation, which extends with more or less of breadth from the moorlands of Yorkshire to the coast of Devonshire. Most of this district was formerly bleak and open downs, in which condition portions of it remain at the present day. Agriculture of late years has been gradually creeping up these elevations, planting and enclosing have been introduced, and by the aid of artificial manures, which are readily transported to what were formerly considered as impracticable portions of the farm, devoted exclusively to coarse, natural pasturage, turnips and the sheep fold are now to be found, alternating with clover and artificial grasses, and the ordinary cereal productions adapted to the soil and climate. The term Cotswold, we are told by scholars, is derived from "Cote," a sheep fold, and "Wold" a naked hill. This district was distinguished in very early times for the number of its sheep, and the fineness and value of their wool. "In their wolds" says the translator of Camden, "they feed in great numbers flocks of sheep, long necked and square of bulk and bone, by reason (as is commonly thought) of the weally and hilly situation of their pasturage, whose wool, being most fine and soft, is held in passing great account amongst all nations." The fineness and heavy weight of the Cotswold fleece are often mentioned by the early writers on rural subjects; and King Edward the 4th, 1464, permitted a number of these sheep to be exported to Spain, where they produced great improvement among the native breeds. Adam Speed, who wrote in 1629, describes the wool of the Cotswold sheep as similar to that of the Ryeland. "In Herefordshire, especially about Lampeter, and on those famous hills called Cotswold Hills, sheep are fed that produce a singular good wool, which for fineness, comes very near that of Spain, for from it a thread may drawn as fine as silk." It is not a little singular that we have no precise or authentic account in any of the writings that have come down to us of the characteristics of this ancient breed, the fate as well as the distinctive characters of which have alike been buried in oblivion.

The sheep that now occupy the same region, and which have done so for upwards of a century, are essentially a long-wooled race, of large size, belonging to the plain rather than the mountain. Of the time and manner in which this change took place, we have no reliable information. It is probable that as the enclosing and cultivation of this elevated region proceeded, shelter by planting and the raising of turnips as a field crop, larger and coarser woolled sheep would be introduced, till a new and distinct breed became ultimately obtained, adapted to the altered and improved condition of the soil and climate. These sheep were formerly of larger size and coarser forms, with, it is said, heavier fleeces than now characterize the breed. Seventy or eighty years ago the practice began of crossing the heavy and somewhat unsymmetrical Cotswold, with what was then designated the New Leicester; and this system of crossing was extensively practiced for a number of years. The result was a diminution of size and weight of wool, and a much greater delicacy of form. After the continuance of this practice of crossing for a number of years, Cotswold breeders became impressed that their sheep were losing too much, both as to carcass and wool, and their constitution not sufficiently hardy to bear the exposure and vicissitudes of their native hills. For the last forty or fifty years, but little crossing has taken place; flock-masters have reverted to the olden type, and depended upon a judicious selection both of males and females from their own flocks. In this way a larger and more uniform animal has been obtained, with a heavier fleece, greater aptitude to fatten, and all the distinctive characteristics of a separate and permanent breed boldly brought out.

Great exertions have been made of late by the Cotswold breeders in England in the improvement of their flocks, and their success in that direction has been of a decidedly marked character. In size the modern Cotswold are superior to the Leicester, and their wool is generally closer upon the body, the staple measuring from 4 to 8 inches, yield-