

in-calf, 3 barren cows, 11 two-years-old heifers in-calf, 13 yearling heifers, 13 weaning calves, and 2 bulls. Sheep; 127 breeding ewes; and, in May, 111 lambs, 53 fat lambs having been already sold, and 3 rams; each ewe having thus produced and brought up 1.21 lambs; a pretty fair average! The ewes are strong West-country Down, crossed with a Cotswold ram, and "lamb and dam," are both fattened, none being kept for breeding. This year 1880 a good ewe of this description would fetch with her lamb something like £5 to £5.10. Seven sows, breeding twice a year, are also kept.

Taking the stock on this farm as cows, i. e. allowing 8 sheep to be equal to one cow, &c. it seems that it requires only 2.6 acres to feed a cow winter and summer.

The work is done by three cart horses; and, there two nags for the master's riding. Course of cropping on the arable land (1) roots, (2) wheat, (3) barley, (4) seeds. If, under such high cultivation, the barley with seeds were to follow the roots fed off by sheep, which is the real four-course shift, the grain-crop would inevitably go down, and smother the seeds.

To this farm the first prize was assigned.

**Tunley Farm.**—Arable, 100 acres; pasture, 284 acres; total 384 acres. The soil is described as heavy; subsoil, clay.

Liquid manure conveyed by pipes to a tank some distance from the farmstead, and used for irrigating lower-lying pasture-land. The returns for pork are large, as 200 hogs are fattened to an average of 200 lbs. each.

Stock: 92 cows and calving heifers, 24 yearling heifers, and 2 bulls.

Sheep: 45 ewes, 63 ewe tegs (lambs of the previous year Scottice, *hoggets*, Gloucestershire, *theaves*), 14 wether tegs, and 2 rams.

Pigs: 12 breeding sows and 147 pigs. Seven cart-horses and 4 cart-colls, 2 nag colts; a pony and a cob are kept for all sorts of work.

The dairy cows, particularly the young ones, as also the yearlings and weaning calves, are, according to the judges, a very superior lot, affording in their appearance ample evidence of the good results due to the use of pure *Shorthorn* bulls. Those at present in use are well-shaped animals of good quality, bred by Mr. Hugh Aylmer, of West Dereham, Norfolk.

Arable land course: (1) roots, (2) barley, (3) seeds, (4) wheat. One hundred and three acres of meadow-land, and sixteen acres of seeds were mown for hay. There were of the grain crops 31 acres of wheat, and 5 acres of barley, promising to be a great crop. Mangolds and swedes, 22½; a good plant, and the land clean and well done. Labour, about 30 s. an acre; cows milked by women, who are paid 3s. per week for milking night and morning. It will be understood that the word *pasture*, in England, does not mean a worn out piece of grass, and weeds, and brambles, but well managed greensward, that can be mown or fed at the will of its master.

This farm the judges thought worthy of the second prize.

An important observation is appended to the report, and is as follows: "A very large entry in the 3rd Class. The percentage of arable land is small, and as only about half of this is devoted to the growth of cereals, the produce of straw for litter is very small. Notwithstanding this, and the large number of cattle and pigs kept, the sweetness and cleanliness of the cow-sheds, piggeries, and yards, and the condition of the animals, we found to be all that could be desired.

#### CLASS 4.

For Farms like the above (class 3) but under 200 acres.

First prize — Kellaways Farm.—Arable, 26 acres; pasture, 100 acres. The tenant, Mr. John Long, employs 3 labourers at 15 s. a week, but, evidently does a good share of the work

himself. He is evidently a good workman, "as the trophies shown in the shape of silver cups for ploughing and other farm work amply testify.

The cattle in the farm are 38 dairy cows, a bull and 80 sheep, 2½ acres to each animal, taking 8 sheep to equal one cow. Four breeding sows are kept, and their progeny fattened and sold at about 200 lbs., in weight, each. The styes are well arranged, paved with brick, with gratings to carry the liquid manure by pipes to a tank; no litter is used, and the styes are kept clean by sweeping and washing. The liquid manure from this source is a wonderful fertiliser, its effects on the growing crops we saw being very good; it is pumped by a chain pump from the tank, and conveyed in barrels to the land.

The stock of horses consists of two cart-horses and one nag.

The arable land is cultivated like a garden, being perfectly free from weeds, and the management of the grass land is very good. All the beans and pease grown are consumed on the farm, and the value of purchased food exceeds the rent by about 50 per cent.

The decisions of the judges were arrived at after three visits, paid at unexpected times from January to May.

A. R. J. F.

#### The Aylmer Milk-Tank.

On Wednesday, May 12th., I had the pleasure of inspecting this arrangement, as suited to the requirements of a farm milking 15 or 16 cows. The frame, about 6 feet long by 4 feet wide, and 3 ft. 2 in high, is formed of wood lined with galvanised iron. The tank, which is covered, is pierced for 6 cans to hold 20 quarts each, the covers of which are pierced with small holes to allow any bad odour to escape. The ice is introduced by means of a trap-door at each end of the tank.

The inventor, guided by the true philosophical principle, that cold always descends, applies the iced water to the upper part of the pails alone; the lower third part of the milk being thus submitted to the action of the natural temperature of the air a continual motion is kept up by the falling of the films of cooled liquid, and the rising of the warm liquid, till a regular temperature is arrived at. This again must tend to throw off all animal smell. The principle is good, and resembles the "attemperators" so indispensable in the Brewery.

From what I hear from people whom I know well who have tried it, I think this milk-cooler, which is both cheap and commodious, is fairly entitled to a trial from all who are not yet fitted with a *Swartz* or a *Cooley* arrangement. It is certain that, if we wish to supply Britain with butter on a large scale, a very great change must take place in our dairy-work; cold water, iced or natural, *must* be used, as it is proved that by skimming sour milk we add cheese to our butter, and this climate will not admit of keeping milk unskimmed, in summer, for more than 12 or 16 hours; too short a time for the cream to rise.

Those who already make, or are thinking of making, their butter in the Devonshire fashion, should look at the "Aylmer Milk-Cooler," as the pails are of just the right height, breadth, and shape, for the immersion in the hot water bath. A specimen of the invention may be seen at Messrs. Larmonth & Sons, 33 College Street, Montreal. A. R. J. F.

#### Directions for using The Aylmer Tank.

The Tank may be set up in the corner of a room or cellar, as it occupies but little space. It requires to be firmly placed and as level as possible; it is then filled with cold water, and is ready for use. If running water be used, its temperature should not exceed 47°, and the Tank should have an overflow pipe to conduct the water away. The square openings in the top of the Tank are made to admit good sized lumps of ice, which must be used if there is no