

the 6th of April last year with 29 cows, gradually increasing the herd till by the end of the year we had 54, keeping the proportions of two-thirds shorthorns to one third of Channel Island; the average number in herd during the year was 47. Of the three great modes of dairying, milk selling, cheese-making, and butter making, we chose the latter for various reasons. Now, having decided to make butter, we had choice of three ways of getting the cream: shallow pans, the separator, and the deep setting or Corley system. We rejected the first as taking up too much room and not being likely to give the best results. We were rather afraid of the separator, the opinion expressed at the Conference here in one or two of the discussions being that it was not suited for private dairies, we accordingly started with the deep setting system. Now the one great essential of that system is a large and constant supply of cold water, and we hoped by the works we had carried out during the winter that we should obtain the necessary supply: but our confidence was misplaced, for in the second week in June the water in our deep well ran out. We determined at once to put up a separator, but unluckily there had been a great run on Laval separators and there was not a single one in stock in England, and we were told we must wait till one could be ordered from Sweden. Every day's delay being of importance, we applied to Mr. Lister, of Dursley, who fitted us up with an engine and the old separator from the Berkeley Dairy Company, but it was not till the month of August that it was ready to start. During those eight weeks in the height of summer we carried on business under great difficulties, and lost a large percentage of our cream. From the time the separator was got into thorough working our difficulties ceased, and though there were some misgivings on the part of some members of the establishment as to the effects on the quality of the butter, I think all will agree now that it not only makes more but better butter than any other system; as to the increase it was most marked, and in round numbers you may see that the separator gives an extra pound of butter per cow per week. The milk given by each cow is weighed at every milking. This is a practice I cannot too strongly recommend. It makes all the difference between working in the light and in the dark, for besides telling you the value of each cow as a milker, it is as good as having a veterinary surgeon to examine your herd twice a-day. The mode of procedure is as follows. — The big milk buckets are placed near the exit of the milking shed, over them is placed a Salter's balance, each milker has a small bucket of a given weight; after milking each cow he weighs his bucket of milk on the balance before emptying the contents into one of the big buckets, the weight is noted down on a sheet of paper, on which every cow's name is entered. When two of the big buckets are full, they are carried on the yokes to the dairy, where they are deposited on a weighing machine in the verandah outside, the men carrying the milk from the cowsheds never entering the dairy. (1) The dairyman having weighed the milk, strains it and pours it into the receptacle, from whence it runs into the separator, it is immediately separated. After the evening milking the head cowman brings his paper with the individual yield of the cows to the dairy, the dairy maid copies on to the back of it from her slate the total amount of milk which has been brought to the dairy, the amount of milk and skim-milk sold and given for feeding, and the number of pounds of butter made; this paper, together with the money received at the dairy door and the cream tests, are sent in every night. A sample of the milk of the whole herd is set up in the cream gauge every day, and the

individual milk of about five cows, so that we test the quality of the bulk every day, and that of each cow about twice a month, once a-week we test a sample of the bulk in the *lactometer*, to ascertain the amount of butter fat in the milk; we also test the milk of any new cow. Every Monday night we make up our dairy accounts, reckoning the amount of butter and cream sold as cash and the amount fed as receipts, not cash. We value our skim milk fed to calves and pigs at 2d. a gallon. We then take the total amount of milk brought to the dairy during the week, and after deducting the amount of whole milk used divide it by the pounds of butter made. We thus see each week how many pounds of milk it takes to make a pound of butter. The next thing is to ascertain how much we are making per gallon, that is a very simple sum, which I need not explain. During the year ending the 3rd April last we made 12,584 lbs. of butter, an average of 262 lbs. per cow, which was sold at an average price of 16½d., £18 0s. 3d. by butter alone, then there is the skim milk and the calf. During eighteen weeks from October to February the pounds of milk which it took to make a pound of butter only averaged 19½, a gallon being 10½ lbs. In six of those weeks it took under 19 lbs., and in the week ending December 11th only just over 18 lbs. During that week we had in milk 31 Short-horns and 11 Channel Island. (1) Each cow had 25 lbs. of chaff, half hay and half straw, which was slightly steamed, 4 lbs. of meal, barley, wheat, and beans, all ground up together, and 2 lbs. of decorticated cotton cake, (2) the dry cows had no cake, the Shorthorns were turned out for a few hours every day, and during January were given the outside of a stack of silage to pick over, no roots were given. Cost per cow per week, reckoning the hay at £3 and straw at £2 a ton, meal at 3s. a bushel of 42 lbs., it comes to — chaff, 3s. 10d., meal, 2s., cake, 9d., labour, 1s. 10d.; total, 8s. 5d. The labour includes coal for two engines and all dairy expenses, this item we hope to reduce next year. The receipts per week for butter and cream were, in cash, £17 8s., and milk fed on the farm we valued at £3 12s., making a total of £21, or a fraction under 9s. a head. The profit is not large, but you must remember that very few of the cows were in full profit, most of them had been many months in milk, and twenty of them were heifers with their first calves, who cannot be expected to milk through the winter like older cows. Again, in collecting a herd so rapidly, you cannot expect your purchases to turn out equally well; many of ours were chance cows picked up in Gloucester market, and that they were not all successes at the pail you will see, when I tell you that our largest yield was 959 gallons and our lowest only 174. We hope by breeding largely and by careful selection to greatly increase the yield. If I might presume to give advice I would recommend all those who go in for butter making to keep a few Jersey cows in their herds, it solves many of the mysteries of making first-class butter. Our experience is that Jerseys do better in this vale than Guernseys, the latter give very rich milk, one of ours giving sometimes 50 per cent. of cream in the cream gauge, but they are very delicate and require much greater care. In conclusion, our farm is 327 acres, 128 acres arable, 10 permanent pasture, the rest old pasture, (3) the soil is somewhat stiff, with a subsoil of gravel, sand, and clay.

Curtis Hayward; Col.

(1) Guernseys and Jerseys.

A. R. J. F.

(2) Cotton cake is almost universally given to cows in England, but not in large quantities.

A. R. J. F.

(3) I don't see the difference between "permanent" and "old" pasture. The former probably means pasture recently laid down.

A. R. J. F.

(1) A wise precaution, as any one who thinks for a moment will perceive.

A. R. J. F.