

faced Cotswolds, £9 16s. 6d., to return £8 15s. 3d. In proportion to their value, Mr. Hardie's and Lord Kinnaird's Leicesters again show best. Of course this reckoning is not free from empiricism; but we think it is sufficiently indicative of the value of each class of animal to be of some little use to those interested in sheep feeding.—*Scottish Farmer.*

### Farm Capital.

Money is needed by the farmer in the prosecution of his business—(1) for payment of rent and taxes for the land he hires; (2) for the purchase and maintenance of implements, of draught animals, and of steam power for the cultivation of the land, and for the conversion of its produce; (3) for the purchase of seed and manure; (4) for payment of labour during the year; (5) for the purchase of live stock by which to consume the green produce of the farm, and by which to provide the home supply of manure on which its fertility must depend.

It is plain that the amount which is made up of these items will vary exceedingly with the circumstances of the farm—(1.) Rent may not be asked for out of capital at all; the landlord may give twelve months' credit and ask for it directly (as he necessarily always does essentially) out of the produce of the land, not out of the capital which the tenant brings on it. Rent, moreover, whether long credit be given for it or not, varies between wide limits according to the quality of the land. It may be 15s. or 20s. an acre or it may be 40s., 50s., and it may vary even from 5s. to £5 per acre, according to the fertility of the land and its neighbourhood to good markets.

(2.) The amount needed for the purchase of farm implements and draught animals necessarily varies with the quality of work needing to be done. Stiff clay arable land cultivated highly needs more costly equipment in this way than lighter, poorer soils, more easily cultivated and laid down probably two years out of every five in grass; and both need larger outlay on implements and power than pasture land. The implements of arable land will cost from 15s. to 25s. an acre, and the horse power perhaps 15s. to 30s. an acre. This supposes steam power to be *hired* for thrashing purposes. If it be provided for steam cultivation, a twelve-horse engine and apparatus, displacing twelve or fourteen horses and their implements and somewhat more, must be added to the capital thus required.

(3.) The amount needed for seed and manure is also extremely variable. From 10s. to 20s. for clover, and grain crops, and from 2s. 6d. to 10. for root crops; probably from 10s. to 15s. on the whole arable farm will be needed for the former; while for the latter the sum required varies from nothing up to as far as another rent, according to the spirit of the farmer and the proved experience of the locality. There are

many farmers who pay £1 per acre annually for artificial manure.

(4.) Labour varies from 4s. or 5s. an acre on grass up to 50s. per acre on our arable land. In the "Hand-book of Farm Labour," the particulars of farms amounting to 7,824 acres of arable land, and 1,690 acres of pasture, are given; the wages paid on these farms were £14,423 per annum, or, deducting £423 for the pasture, 33s. an acre for the arable land.

(5.) The capital needed for the purchase of live stock and for extra food for them is the last item on the list, and this obviously will differ with the fertility of the land, the activity of its cultivator, and the rotation of crops adopted; and even in the case of pasture lands, where the natural fertility of the soil is the leading point, it varies from £2 or £3 an acre to £12 or £14—the grass in the former cases fit for little more than a sheep or two per acre, and the latter feeding annually a heavy bullock. On ploughed land the influence of various rotations comes into play, and the quantity of meat made annually per acre has been shown to vary from 30 lbs. or less up to 1 cwt. or more. In the former case it is plain that the stock will not need to be more than a sheep to every acre or to every 1½ acre; in the latter, it may be as much as three sheep or more per acre. But these calculations do not proceed upon the more economical processes now adopted, in which roots are pulped or steamed, and straw is cut into chaff, and much purchased food is used, so that the estimate of the capital under this head may vary from £1 or less per acre up to £5 or more, or when heavy crops of roots or straw are grown and double crops of vetches and rape, &c., are taken and consumed upon the ground.

Adding these items together, it will be found that the capital required on arable land varies from £7 to £15 per acre. Of these sums a varying portion will be payable on entering the farm on valuation to the out-going tenant, who will have spent for his successor certain amounts under most of these headings.

He may have paid for labour and for seed and for manure upon certain portions of the farm, and he may hand over by valuation certain portions of the implements and live stock which he has used upon the farm. Of the remainder a varying portion under most of these heads will not need to be paid until after harvest, when means may be provided for the purchase of live stock, and for the payment of rent by the sale of grain. In this way the burden of these demands upon the purse of the farmer is considerably reduced.

Nothing has been said of works for the permanent improvement of the land, which are properly a landlord's portion, but which, if the tenant be secured for long enough in his occupation, may be profitably undertaken by the latter. Almost unlimited scope for the profitable application of capital to land is thus provided over a