

&c.; the process of disinfecting animal matter likewise.

The second part is to be devoted to farm implements in motion by animal or steam power, ploughs, reapers, &c. Periodical sowings will be made, to show the working of sowing and hoeing machines. Measures will be taken so as to represent each month the labours of the season.

The third part will be arranged to exhibit specimens of natural and artificial meadows, drainage, irrigation, raising water, &c.; here the merits of mowers and horse rakes will be compared.

The fourth part will be reserved for culture of beets, potatoes, turnips, and other root crops, with the most improved implements.

The fifth part is to be assigned to special culture, mushroom beds, water-cresses, roses, gooseberries, strawberries, violets and other flowers of which large crops are grown to supply the cities.

Exhibitors in these departments are to arrange beforehand with the superintendent of the department, who will prepare a daily programme of what is to take place. Raw materials, horses, oxen, steam power, &c., will be placed at the disposal of exhibitors at cost price.

Sales of animals will be held periodically on the Ile de Billancourt. Various naval and life boat experiments will likewise be shown.

HISTORY AND CHARACTER OF THE SOUTH DOWN SHEEP.

(Continued from preceding number.)

Mr. Culley, in his *Live Stock*, 1807, notices the exertions "of the ingenious Mr. Ellman, whose flock is already superior to that of most of his neighbours, in carcase, quantity, and quality of wool." This enterprising and skilful breeder did not, however, content himself with mediocrity; and in the *Annals of Agriculture*, vol. xx. p. 224, Mr. A. Young thus speaks of Mr. Ellman's Southdowns:—"His flock, I must observe, is unquestionably the first in the country, the wool the finest, and the carcase the best proportioned. Both these valuable properties are united in the flock at Ulynde. He has raised the merits of the breed by his unremitting attention, and it now stands unrivalled." Mr. Ellman's own description of them is very unpretending. He says (*Annals of Agriculture*, vol. xvii.) they "are now much improved both in shape and constitution; they are smaller in the bone, equally hardy, with a greater disposition to fatten, and much heavier in carcase when fat.—They used seldom to fatten until they were four years old; but it would now be a rare sight to see a pen of Southdown wethers at market more than two years old, and many are killed before they reach that age." Doubtless the age is reckon-

ed, as is usual, with sheep, not from the time when lambed, but from the time of the first shearing,—a point always to be borne in mind unless the contrary is expressed.

When any spirited individual commences a system of improvement, he communicates a stimulus to others, and if he have the public good at heart, diffuses around him the means by which others may be enabled even to compete with himself. Certain it is, that Mr. Ellman's improvements led to the rapid amelioration of the Southdowns throughout the whole of their range; and now if we look at the quotations in the Smithfield market, we find the estimation in which they are held.

The average dead weight of the Southdown wether varies from eight to eleven stones, but at the Christmas show there are usually some pens in which the sheep average eighteen or twenty stones; but these are picked sheep, and fed high for the occasion.

No sheep are more healthy than the Southdowns. They are seldom affected by the rot, nor do they often suffer from hydatids in the brain. This general good health is owing partly to the nature of their pasturage, their change of food, and the good fresh air of the breezy hills, and partly to their journeys of two or three miles twice a-day from the fold to the pasture, and from the pasture to the fold, a plan of treatment which the Leicesters would not bear, and one of the reasons why they will not succeed on the Downs.

To the alteration in the character of the wool of the Southdowns we have already adverted. We may here add, that the hogget wool, that which is left on the sheep untouched till the second shearing, and which was always used as a combing wool, has decidedly become more valuable since the present system of management; while its length is very considerable, it is finer than the ordinary long wools, is far more disposed to felt, and is applicable to more numerous and more profitable purposes.

Though the Southdowns succeed best on our southern ranges of chalk hills, yet they have penetrated into almost every part of the country, and generally thrive where locality and soil suit them. The northern hills, however, where the Cheviots and Black-Faced breeds prevail, are unsuitable for them. Crosses between the Southdowns and other breeds of middle-woolled sheep have been found to answer very well; and indeed in Western Sussex the prevalent stock is a breed apparently between the Somersets and the Downs, and heavier than the latter. In Hampshire the old black-faced race is crossed by the pure Southdown. The latter has either usurped the place of, or greatly modified the old Berkshire, and this race prevails in many parts of Kent,

while the Romney Marshes bred a breed of long-woolled and valuable sheep which has existed there time immemorial. The Wiltshire sheep is but a variety of the Southdown; and in Dorsetshire, Norfolk, Suffolk, and Cambridgeshire, crosses with the Southdown prevail; indeed the Southdowns are contending not unsuccessfully with the old breeds of those counties, and may perhaps, if not supersede them, curtail the extent of their range.

On the other hand, in many parts of Sussex, Somersets and Dorsets are kept for the sake of early lambs for the London market; these lambs are ready for the market often before Easter, while the Down lambs come to the market in June or July. In the vicinity of Petworth (a market town in the hundred of Rotherbridge and rape of Arundel) great numbers of grass lambs are fed for the metropolis. The breed there kept is the Dorset (a horned breed), and the ewes drop their lambs in December, and nearly to the time of yearning are kept on stubble grounds, then on turnips and artificial grasses. After the removal of the lambs the ewes are fed as high as possible—that is, if the farmer has not expended his food on the lambs—and put with the ram.—Ewes impregnated at this early season are valuable to the house lamb farmer, who purchases them from the field lamb farmer, and if successful may count upon profit.

The great mart for the sale and purchase of wool in Sussex is at Lewes; a stock market is held every fortnight, and a wool fair is held on the 20th of July.—A fair is held at Petworth, on the 20th of November, for sheep; at Chichester, on the 20th of October; at Lindfield, on the 5th of August; and at Finden, on the 14th of September.

Throughout a great portion of Kent, along the range of the North Downs, where the ground is open, and is covered with short pasturage, the Southdown sheep are extensively cultivated. But Romney Marsh and the adjacent tracts constitute the head-quarters of a long-woolled breed known as the Romney Marsh sheep. In some of the more eastern parts of the county a mixed breed is found between these sheep and the Southdowns. They are kept on the upland pasture grounds, and yield a good and serviceable wool. On that portion of Kent called the Weald great numbers of Romney Marsh lambs and Southdown wethers are fed during the winter. At this season of the year the grazing lands are covered with stock of different kinds, but throughout the summer months comparatively few sheep are to be seen.

In the county of Surrey the Southdown breed extensively prevails, and is well suited to the short feed of the chalk hills; but there are smaller varieties of this race on some of the wild and sterile heaths so