

Veterinary Department.

The Prevention of Disease.

It would, indeed, be an admirable arrangement, alike for humanity and for the lower creatures of creation, if the ouches and ills which escaped from Pandora's mythic box could be again secured, and locked up beyond all chance of fattening on health and life. To hunt down and exterminate some of the ills that flesh is heir to is perfectly feasible. Others, we fear, must be accepted as part of the primal evil curse. Many ailments, such as those of a scrofulous character, have become very firmly implanted in the animal system, they have assumed hereditary powers, so marked that generations would elapse before their subtle remains could be thoroughly eliminated. Another large class of disease, alike in men and animals, spring from the external circumstances amid which living creatures are placed. Extremes of cold and heat, sudden changes of temperature, overcrowding, and hard work, sap the vigor and jeopardise the health of thousands. Under more careful management, disorders of their class, although they cannot be altogether done away with, might evidently be materially diminished in number and severity.

The diseases which we may confidently hope entirely to blot out, are those which result from contagion. Lord Robert Montagu has stated that since 1842 one million and a half of cattle have been destroyed in Great Britain and Ireland by contagious diseases. The specific organic poisons or contagions which generate such diseases can usually be isolated or destroyed, in other words, fresh subjects on which the poison can fasten may be kept beyond its reach, and thus it is killed, as it were, by starvation, or the poison, as rapidly as it is evolved from the sick or infected animal, is neutralised or robbed of its vitality by disinfectants. As our readers well know, the cattle plague, which is probably the most virulent of the contagious disorders of animals, was in this way banished from our shores.

We would gladly apply the like principles to the prevention of other disorders. But this cannot be done effectually with diseases which, like cattle plague, are propagated mainly or entirely by contagion. In the human subject, the diseases depending upon contagion alone are more numerous than in the lower animals. They include smallpox, scarlet fever, and other eruptive complaints, with the worse class of typhoid and typhus fevers. The eruptive fevers more especially are not productive except by contagion only. In the lower animals the chief contagious diseases which have occurred in this country are cattle plague, cow-pox, and sheep-pox, strangles in horses, hydrophobia in dogs, with the pleuro pneumonia epizootic in cattle, mouth-and-foot disease in cattle, sheep, and pigs, and glanders and typhoid fever in horses. But unfortunately for our success in extirpating these diseases, they do not, like cattle plague, cow-pox, or variola ovina, invariably spread by contagion alone. Under certain conditions they appear to be developed *de novo*. Overcrowding is stated to produce mouth-and-foot disease. Exposure in railway trucks, or in unsheltered pastures during severe weather, is believed to develop pleuro pneumonia, and such cases subsequently assume contagious properties, and become the sources of extensive disease. Glanders in horses more frequently depends upon close foul stables, bad feeding, colds, or overwork, than on contagion or inoculation. Gastric fever and influenza amongst horses, although occasionally spreading by contagion, are more generally traceable to other causes, and form a sort of connecting link between contagious and non-contagious diseases.

Considerations such as these increase the difficulties which stand in the way of our summarily getting rid of diseases like pleuro pneumonia and foot-and-mouth disease. Mr. Barclay, Aberdeen, in his sensible paper, read a few weeks ago before the Scottish Chamber of Agriculture, proposed that efforts should be made to stamp out the pleuro-pneumonia epizootic in the same way as was successfully done with the recent attack of rinderpest, by slaughtering all animals affected, and by a local assessment providing compensation for the stock thus destroyed. Mr. Barclay states that the average loss of animals attacked by pleuro reaches from 80 to 90 per cent. This is much overstated; under rational management one-half of the cases attacked should be saved. But even with this larger proportion of recoveries, it is certainly sound economy at once to slaughter the first cases that appear in any herd, and by segregation and disinfection, endeavor to arrest the further spread of the complaint.

The notable reduction in the ravages of pleuro pneumonia, and also of mouth and foot disease, during the prevalence of the cattle plague and whilst

the movements of stock were restricted, indicate how greatly such disorders might be held in check by preventing the movement of all animals affected by such contagious maladies, or which have been in communication with infected animals. The appearance of contagious disease on any farm, or in any dairy premises, or amongst any sort of stock, should at once be reported to a properly constituted local authority. From infected premises no animal should be removed alive without a special order, nor until the premises be entitled to a clean bill of health. Fines should be exigible for any stock labouring under any contagious disease, and kept without information having been given of the occurrence of such sickness; fines would also be fairly imposed for any diseased stock travelling on any public road, or taken into any market-place or railway station. At market places, fairs, important railway loading stations, should be under strict inspection. In all railway or other journeys extending over eight or ten hours, provision should be made for the feeding and watering of the stock, and for their protection from inclement weather. The attention of the Legislature ought to be directed to the internal arrangement of the stock traffic of the country. We require to be protected from diseases already in our midst as well as from those which threaten us from abroad. *North British Agriculturist*

The Dairy.

Cow Management by London Milkmen.

In the Journal of the Royal Agricultural Society, Mr. J. C. Morton thus describes the management of city cows, by the leading London milkmen:

"Having got your cows well purchased, the point of next importance is to feed them properly. Their invariable food in London cow sheds is grains (brewers' or distillers' grain, the spent barley or other grain after being well washed or 'worked out' in the process of brewing and distilling) with mangolds and hay in winter, and grass in summer. When first the cow is received into the shed, it is important that she be gradually accustomed to her new food. She should therefore receive during the first week little but green food, grass or clover, or vetches in the summer, and mangolds and hay in the winter, with bran mashes, into which grains may be gradually introduced, until, as she takes to them, she may at length be treated as the others are. What this management generally is, I take from the statements of two men, neither of them very large dairymen, but both successful managers. Mr. Sumpton, of Little Warner Street, Clerkenwell, who usually milks about thirty cows, describes his day's work as follows:

The cowmen enter the shed at 5 a.m., and proceed to milk. In the case of the wholesale milk trade, when the dealers who buy the milk do the milking, one good man suffices for thirty cows. The cowman then only helps if necessary at milking time, and sees that the work is thoroughly done—his main business being to feed and tend the cows. If he has any reason to suspect that a cow is not milked out, it is his duty to his master to strip her, for nothing injures a cow more than imperfect milking, and if he succeeds in getting another half-pint from her, his master will give him 6d. or 1s. for it, and fine the dealer that amount for his servant's default. When not only milking, but serving the customers at shops and houses has to be done, three men are required for 30 cows. They begin milking at 4 a.m., and finish between 5 and 6. About a bushel and a half of grains is then given between each pair of cows, and they are partly cleaned out, and with the grains are done a truss of hay (4 cwt.) is divided amongst 12. In the meanwhile the men have been serving the milk; after which they have their breakfast (about 8 a.m.) After breakfast time a bushel of chopped mangolds, weighing 50 or 60 pounds, is given to each two cows, and the cows receive another truss of hay amongst 12. The cowshed is then cleaned out, and the cows are bedded and left. At 1 p.m. milking recommences, and very much the same feeding as before is given. At 2.30 grains are given as before, followed by the same quantity of hay, and then (and only then during the 24 hours) the cows are freely watered. They again receive a truss of hay amongst 12, and are left for the night. The grains are either brewers' or distillers' grains; the former are as much inferior to the latter in value as they are in price—the one at present costing 3s. to 4s. a bushel, and the other 5s. and 6s.

In the case of cows in heavy milk—also in the case of those rapidly losing their milk, which must be sent to market as quickly as possible—it is common to give two or three quarts of pea meal mixed up with the grains morning and evening, each cow thus receiving that quantity daily. And when the milking is coming to an end, for three or four weeks before

the cow is sold, she may receive two or three pounds of oil cake in addition. A full bushel of grains, half a bushel of mangolds, one-third of a truss of hay, and five or six pounds of pea meal, in the case of the fattening cow, are thus the daily ration in a London cow-house. The grains at 2s. a quarter, the hay at £6 a ton, and the mangolds at 20s. a ton, cost 1s. 3d. a day, and with meal or cake, the daily allowance may cost from 1s. 6d. to 1s. 9d. per cow—10s. to 12s. a week.

In summer time the food is grass with grains, and meal if necessary. Most cow-keepers, except the very smallest men, either have a small suburban farm, or buy a few acres of vetches, clover or grass, and cart it in themselves. When it is bought daily at the cow-house it costs from 1s. to 1s. and 3d. a cwt. during the summer, and the cows receive about that quantity daily, given to them as fast as they can eat it, morning and evening, with their grains.

Of course the proper feeding of the cow after she has been well bought, is the very essence of the business of the cow keeper. It is a proof of good management when she is so treated that no kind of food which she receives shall pall upon her taste. The maxim is never to overdo a cow with any kind of food. Some cows are exceedingly greedy for distillers' grains, and they yield a very large quantity of milk upon them. But it is easy to 'over-do' a cow with grains; and she should be always stinted of her favorite food, or she will get sick of it, as I have seen often enough in the case of this very article—distillers' grains."

The Devon as a Dairy Cow

The Devon may be called medium, in the quantity of milk she yields, and in its quality, superior. The older, or unimproved race, were somewhat noted for the quantities of milk they produced, as well as its quality. A gallon of Devon milk yielded more butter than that of almost any other breed, as it does now, except the Alderney. But the improvers, in the attainment of a finer form, and heavier substance in their animals, perhaps sacrificed somewhat of the quantity of milk for the more liberal development of flesh, well knowing that both flesh and milk could not thrive equally together in the same animal; although when the milk ceased, the flesh came on with due rapidity, under generous feed. Yet with an eye to breeding her solely for milk, she is well fitted for a dairy cow. Docile in temper, easy in keep, placable in disposition, she is readily managed. Her udder is soft, tidy in shape, with thin, silky hair upon it, clean, taper teats, easily drawn, and every way satisfactory to her keeper.

We have kept thoroughbred Devons thirty four years sometimes as high as twenty five or thirty (not all milk cows) in number. Many of them have been excellent milkers, and some of them extraordinary for their size. We once had two three year old heifers, with their first calves which gave for some three months after calving, on pasture only, with steady milking, an average of eighteen quarts per day; and from cows which we have at different times sold to go to other States, the accounts of their milk have been equally good. It is but fair to say, however, that after we commenced crossing our cows with bulls of later importations, some fifteen years after the commencement of the herd, the large milkers were not so numerous, although the cattle from these crosses were somewhat finer. The bulls we used were apparently bred from stocks highly improved, with an effort more to develop their feeding properties, than for the dairy. After all our Devons yielded, on an average, quite as much as any common cows we ever kept with much less consumption of forage.

With all her alleged deficiencies, the Devon possesses the inherent qualities of a good milker. Her dairy faculties may be bred out of her by neglect of that important item, and with a view to give her an earlier maturity, and more weight of flesh; but even under that system, she will occasionally persist, as we have known in various instances, in giving a largo flow of milk, exceeding many common cows of equal size. On the whole, from the accumulated accounts we have received from time to time, coupled with our own experience, we pronounce the Devons, as a race, when bred with an eye to the development of the dairy quality, considering their size, and consumption of food, good dairy cows, both in the quantity of milk they give, and the butter it yields.—*L. F. Allen's American Cattle.*

The milk train on the Housatonic Railroad began running from Pittsfield, Mass., October 1. A year ago this business was begun as an experiment, when forty four cans of forty quarts each were the whole quantity sent, which has increased to three hundred and forty daily. Ten cans are promised from Pittsfield, which doubtless will be increased tenfold.