

Stock and Dairy.

Animal Parasites.

At a recent meeting of the Stowmarket, (England) Farmers' Club, a paper upon animal parasites was read, from which we extract the following. Doubtless the greater part of our yearly losses of stock is caused by diseases which result from parasites, to say nothing of the danger of using the flesh of affected animals for food:

"In carnivorous animals the tapeworms possess rows of hooks in the head, as well as suckers. In herbivorous animals, such as oxen and sheep, they possess suckers only. With this difference, which was simply an adaptation to different conditions under which food passed into the alimentary canal, the life history of all tapeworms is similar. The head is in reality an animal, for it is possessed of suckers or hooks, and has begun to bud into one of the well-known joints. The budding process takes place next to the head, so that each joint is thus pushed a step further along to the intestine. This continues until the whole of the intestines might become completely charged with those joints. The joints are connected by a kind of canal down each side. The interior of each joint is filled with a large branch ovary. When the joints are detached, the skin decomposes and the ovary is thus liberated. A tapeworm has often been known to extend to sixty feet in length, especially among those of the ox, and possessed more than 1,100 joints, and as each one of these tapeworms developed many millions of eggs it was not surprising that the eggs were found almost everywhere, being blown about by the wind. In this dried up condition they possess an amazing vitality, remaining uninjured perhaps for years. Should a pig, an omnivorous feeder, partake of food in which some of these eggs were contained, they would be conveyed into its stomach, where they would be converted into larvae, and would after a short time bore their way through the pig's stomach and get into its muscles. There they would be quiescent, and assume a condition like the chrysalis; this condition is called encysted. Pork killed in this condition is said to be measles, and should it be cooked without the larvae being destroyed, and partaken of by man, the encysted larvae would then develop in man into the tapeworm. The tapeworm of dogs is of a very peculiar kind, and for a long time it was a matter of wonder how the creature got into the stomach of the dog. Now the secret was out. Sometimes when dogs affected by these worms went near sheep, the sheep also suffered from them. When in the stomach of the sheep they bored their way through until they finally got into the brain, where they became encysted, and in this condition they caused the disease among sheep well-known as staggers. Man himself sometimes suffers from the encysted larvae, which produces a disease called hydatids. Sheep were also affected by another parasite belonging to a different order from that of tapeworm called flukes. These creatures possess a different internal organization, and attach themselves by means of suckers alone. Each worm was hermaphrodite and their presence produced the well-known sheep rot. The eggs of the sheep fluke were blown about until they sometimes found their way into the water, where they swim about like microscopic organisms, and even become parasitic upon fresh-water mollusca. It is undoubtedly because of sheep drinking the water in which the larvae are present that they become affected by them. Lambs and sheep are also affected, especially the former, by round worms called *nematodes*, especially by one form called *strongylus*, and the disease which the presence of this form gives rise to is called horse or husk. It is generally to be met with in the bronchial tubes or throats of young lambs. It also gets into the interior of the heart or lungs, where it becomes encysted, and produces tubercular disease. When the *nematode* forms become encysted in man they produce a disease resembling rheumatic fever called *trichinosis*. When they are encysted in some animals, as in pigs, they are called *trichine*. In some instances these intestinal worms were not considered injurious; for instance, the Abyssinians never considered themselves healthy unless suffering from tapeworms. The dung of cows is frequently full of tape-like forms, although the cows do not seem to be suffering from any ailment. Some sheep are affected by parasites, yet nevertheless they yield prime mutton. It would seem from what is already known of the life history of these parasites that the danger arises from their excessive development."

International Live Stock Exhibition.

The Bureau of Agriculture, International Exhibition, is receiving applications for the assignment of stalls for the display of horses, neat cattle, swine and sheep. The live stock show will be made in serial order, commencing with horses, Sept. 1st to 14th; dogs, Sept. 4th to 8th; neat cattle, Sept. 21st to Oct. 4th; sheep and swine, Oct. 10th to 18th; poultry, Oct. 27th to Nov. 6th. No charge will be made as entry fee, nor for the use of stalls, which will be of first-class character in all respects.

The stock yard is of sufficient area to allow the construction of 700 box stalls for horses, each 14 feet square, these to be afterwards divided for cattle, by longitudinal partitions, into 1,400 stalls, each 7x14, all of ample elevation and security. The stock yard is immediately alongside of the tracks of the Pennsylvania Railroad, which, by its connections, is able to transport animals from almost any part of the Union direct to the exhibition grounds.

The stock yard will be thoroughly well watered, and lighted by gas, and under the constant charge of a company of Centennial guards. All the prominent transportation companies agree to return, free of freight, animals sent for exhibition upon which full rates were paid in the first instance. Exhibitors, or their agents, will be required to assume the entire charge of horses, neat cattle, sheep and swine, and be alone responsible, although the Commission will do all in its power to provide for the comfort and safety of the animals. Attendants upon stock may sleep in the stalls, or can find ample room at the numerous hotels and taverns in the immediate vicinity. Hay and straw will be furnished by the Centennial Commission free of charge. Roots and grains will be sold at depots upon the ground in the stock yard. The prices charged will be simply those of actual cost, the attendants upon stock drawing the daily supplies upon coupon tickets, which will be sold from the office and furnished to the attendants by their employers. Each breed of well established character in the various families of live stock will constitute a distinct class, under which awards will be made as provided for in classifications.

Though it is not proposed by the officers of the Bureau of Agriculture to have competition between immature animals, still young animals may be stalled with their dams, that the transmission of valuable qualities may be shown. In this view, breeders are particularly requested to make exhibition of succeeding generations of animals in direct genealogy. Single animals and herds, entered for competition in any class, must be the bonafide property of the individual in whose name they are entered. This rule does not, however, prevent State Centennial Boards and Associations from entering for display flocks and herds made up from the stock of various owners.

Every animal in its class, as to breed, sex and age, possessing points of excellence, will be reported upon more or less fully, according to its inherent and comparative merit. Exhibitors, whose stock receives the commendation of the judges, will be presented with a diploma, specifying the typical features of each animal, and supplementary to the diploma, will be presented the uniform bronze medal of the Commission. Of more value than either the diploma or medal, will be the special report over the signatures of the judges, presented to each exhibitor of meritorious animals, stating fully the reasons why they awarded him a diploma and medal; thus a feature will be developed never before attempted. The judges on each class will also make a general report upon the characteristics of each breed, especial reference being made to animals exhibited of superlative merit. These reports will be embodied with the reports of judges on other groups, and be highly valuable for reference in the future. Numbers alone will distinguish animals in the show yard preceding the inspection by the judges, afterward full opportunity will be given to exhibitors to display their cards and trophies. Animals may be sold at private or public sale during the exhibition, and within the yard; but no animal will be allowed to be removed prior to the evening of the closing day. Special premiums from societies and individuals must be awarded through the hands of the Centennial Commission. During the season of the display of cattle opportunity will be given, if desired, to exhibit the butter characteristics of the various milking breeds. Churns can be readily had and a room secured for the exhibition of the process of butter making and the qualities produced.

During the play of sheep a room will be provided for the exhibition of fleeces, to which it is trusted breeders will not fail to contribute. Classification lists and entry forms will be forwarded on application to the Bureau of Agriculture, Centennial Commission. Entries will close on the first day of August.

Jersey Cattle.

Mr. Chas. Aldrich, of Hamilton county, Iowa, gives, in the *Hamilton Freeman*, some valuable items relative to this variety of stock, which is at present attracting so much attention:

In the English Channel, near the coast of France, there are three islands, viz.: Alderney, Jersey and Guernsey. On these islands, for over one thousand years, without admixture of other stock, these cattle have been bred with the view solely of developing high qualities in the production of milk and butter. So well have the Channel Islanders succeeded, that in this direction these cattle have no superiors in the world. What the short horns are in the direction of beef, these cattle are in the production of rich, golden butter, both as to quality and quantity. Though bred on all three islands, the cattle at present go by the general name of Jerseys; formerly they were called Alderneys; and parties are now engaged in the effort to get up a herd book which shall include only the Guernsey stock. But the cattle are essentially one breed. In older regions, Jersey butter commands very high prices. For instance, Mr. C. S. Sargent, of Brookline, Mass., markets his in Boston, getting \$1.25 per pound throughout the entire year. A Mr. Burnett (son of the Cocoaaine man), who lives near Boston, gets the same price. Col. Geo. E. Waring, jr., of Newport, R. I., who is the secretary of the American Jersey Cattle Club, and keeps the registry of all the pedigrees, is also a butter maker, but has only been able to realize \$1 per pound, though he hopes to equal his neighbors in quality and price before long.

Scab in Sheep.

The following is from the transactions of the Highland Agricultural Society of Scotland:

It is clearly ascertained by scientific men that the scab in sheep, like the itch in the human being, is connected with and propagated by certain minute insects belonging to the class of acari, which inhabit pimples or pustules. But the question naturally arises, how came it first into existence? This problem is very difficult of solution, and puzzles the most eminent physiologists. But, as I have already said, I have never known it to break out spontaneously among a flock of sheep, properly managed, during thirty years' experience as a shepherd in pastoral districts. Various and conflicting opinions exist as to what extent the disease is infectious. Some affirm that it requires sheep to come in contact with the disease before it can be communicated, while others maintain that the disease is propagated by the mere travelling on the road, such as a public drove road, from large markets or fairs. I, however, do not think the disease is so catching as the latter advocates affirm. For example, I acted as shepherd for sixteen years, on various farms where the drove road from Falkirk to the south passes through the sheep pastures, and every year some of the lots of sheep were more or less affected with scab, and during all that period not a single sheep of which I had charge caught the disease.

The cure of scab lies in the destruction of the insect, but the important question is, what is the best composition or infusion for that purpose? The remedies that are commonly employed, are numerous, but the most effectual, with the least danger of injuring the animal, that I have ever seen employed is the common spirits of tar; and, if properly applied, will penetrate and destroy the insect concealed in the pustules, or buried beneath the skin. The quantity applied may vary according to the age of the sheep, but for hill, or ordinary breeding stock, one bottle of spirits of tar, mixed with twelve times the quantity of water, is sufficient for twelve sheep; or one common wine glass of the spirits of tar, mixed with twelve times the amount of water, is sufficient for one. If mixing for a hundred, six gallons of water with six pounds of common soda ought to be warmed to the boiling pitch, then add the spirits of tar.

Chemistry.

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