

comes the contagion? As to the origin of the diseases under consideration, it is difficult to state positively; some claiming to trace its commencement to the introduction of germs brought from Chicago to the vicinity of Kingsville a couple of years ago, while others contend that they can show evidence of outbreaks many miles distant from the above named source. Apart from preventing further contagion, its origin is hardly a matter with which we have now to deal. The fact is, that a seat of contagion exists, and it is the duty of all concerned to face the situation frankly and without prejudice, and to deal with it firmly with the one end in view, of preventing further introduction into our herds, and stamping out at any cost that which already exists. To our minds it must be gone at systematically, intelligently, and resolutely. The spread of the malady appears to have been so far confined to a few counties lying in the extreme south-western portion of the Province, especially along the various lines of railways crossing that part of the country between Detroit and Buffalo; in fact, the outlet for the American hogs, for it is an indisputable fact that thousands of cars of American hogs pass between those points annually, and we are justified in believing that many of them come directly from the infected sections in the West, not intentionally shipped in a diseased condition, but developing the disease in the course of the journey, having been exposed to and contracting the disease just at shipping time, the period of incubation varying from a couple of days to as many weeks, for it is very improbable that hogs coming from a country in which thousands die annually should all pass through free from the disease. This being the case, is it not quite reasonable to suppose that a great percentage of the cars in which hogs are shipped are badly contaminated with the germs and distribute them in the droppings along the course of their journey? Its spread has so far been almost wholly confined to this one section. We are quite justified in looking where we do as to its admission into this country.

We are informed that these trains have been entering Canada and passing through without any inspection of cars, not to mention animals. The railways are the real beneficiaries from this traffic from the Western to the Eastern States through south-western Ontario, and might fairly be charged with the expense of such inspection. Much more rigid measures should be instituted at the port of entry for American cars coming into the country. Competent men should be located there to inspect thoroughly each and every car coming in and its cargo of animals. Our readers understand, of course, that hogs entering Canada for breeding purposes must undergo as formerly the regular quarantine.

[NOTE.—Since the foregoing was written we have received a copy of a new order-in-council prohibiting the importation of swine manure and authorizing the Minister of Agriculture to instruct veterinarians to declare cars or other conveyances bringing animal manures into Canada as an infected place, and prohibiting their being unloaded if believed to be a source of disease.—EDITOR.]

TWO TYPES OF DISEASE.

The forms in which the disease exists, and in which it has shown itself in this country, are hog cholera and swine plague, and while the terms appear so closely associated they signify two entirely different conditions, and here is where we believe much confusion has been wrought in connection with the past outbreak in Essex Co. Hog cholera is a disease of the digestive tract, attacking the bowels, the symptoms in the very acute form being very decisive, animals dying in many cases before illness is at all noticed, or in some cases within two hours from the first noticeable symptom; in the less acute type (according to the severity of the attack, constitution of animal, etc.) lasting many days. In the greater number of cases the progress of the malady is slower and there is consequently a much better opportunity to observe the symptoms. There is at first seen the signs of fever, shivering, unwillingness to move, loss of appetite, fever increases rapidly, animals appear stupid and dull, having a tendency to hide in the bedding. The bowels may at first be normal or constipated at the beginning of the attack, but as the disease advances there is a liquid and fetid diarrhoea, abundant, exhausting, and persistent to the end. The breathing is more rapid than usual, and may be oppressed and labored in the later stages. There is a cough which is usually not frequent but generally heard when the animals are driven from their bed. The skin is often congested and red over the abdomen, inner surface of the limbs, under surface of the neck, and on the ears, the color varying from pinkish to dark red or purple. There is rapid loss of flesh, the animal grows weak, stands with arched back, the abdomen drawn up, walks with a tottering, uncertain gait; there is less and less inclination or ability to move, the weak-

ness and exhaustion increase until death results. The symptoms of swine plague in many cases are not noticeably different from those of hog cholera. Frequently, however, the lungs are extensively inflamed in swine plague, and in that condition the breathing is more oppressed and labored, and the cough more frequent and painful, the course of the disease varying with the severity of the attack, or from one or two days to three weeks. In hog cholera it is believed that the disease first attacks the intestines and secondarily invades the lungs, while in swine plague the first effect is believed to be on the lungs and afterwards the intestines, and while the germs appear in many respects alike, when examined under the microscope their difference is very noticeable when closely watched. In the first place the germ of hog cholera is furnished with an organ of locomotion which the germ of swine plague does not possess, and having power of making rapid movements of its own, while that of swine plague depends upon the movement of the fluids which contain it for its transportation, consequently it is easily understood why hog cholera is the more contagious. Another point, and one which is very important, is the fact that in many cases of swine plague the symptoms of illness are almost absent. For a few days there may be slight dullness and drooping of the tail, but the appetite is retained, the temperature is scarcely affected, and neither skin eruption or diarrhoea is present. These statements are based on experiments in

principles of cleanliness around their premises there should certainly be some one having authority take the matter in hand and cause such places to be placed in a proper sanitary condition. We have in these few counties a very level—in fact, flat—country, much of it clay land, in which there can be neither natural drainage or soakage, and which necessarily demands more attention than a more rolling country. Coupled with this we find hogs herded together by twenty-fives, fifties, and even greater numbers, fed by the wholesale, with little or no bedding—just the condition to breed disease. Again, the character of the food must not be lost sight of, which is chiefly corn, morning, noon and night, and occasionally between meals. These are the conditions which we find associated with hog cholera in the United States, and Canadians should heed the warning. This American system must be discarded. Attentive readers of the FARMER'S ADVOCATE well know the necessity of feeding a ration not so rich and stimulating, but rather one calculated to maintain a stronger condition of health, such as, for instance, the addition of roots, bran or clover, or the use of a mixture of the ordinary Canadian coarse foods, such as peas, barley, oats and bran, with corn, for rightly used corn is a wholesome and profitable food. Reared in this way we would not look for such rapid progress of disease in case of infection, and would expect to find it in a less fatal type, as our hogs would possess greater power of resistance.

NEGLIGENCE.

In the past we believe it has been customary to destroy those animals only which gave sure evidence of the disease, and to quarantine the balance of the herd, which, in our opinion, has been a grave oversight, for those animals which were immediately exposed were almost as certain to contract it in some degree of severity, and, as we have already said, some may be so slightly affected as to escape notice and yet be as capable of spreading the disease as the most fatal case that exists. We are informed that this regulation has or is about to be altered, and rightly so, for we believe that had a more rigid step been taken a year ago last September fewer animals would have been lost.

Another point noticed requiring correction was that animals for shipment from the district were allowed to be collected at the shipping yard from all quarters, and not until they were there was the inspector asked to make his examination. We believe the folly of this action has been so thoroughly impressed on every thinking man in the district that some alteration in the regulation will very soon be made, for had the animals which were collected at Kingsville, and detained by the local inspector recently, been seen at their homes much trouble would have been avoided. The diseased animals would have been condemned at their own pens; healthy ones would not have been exposed to contagion, and would not have been compelled to lie in quarantine ever since. Again, we consider the home premises the proper place upon which the inspection should be made, and every herd from which animals are to be sent should be seen, for we believe it possible for the disease to exist in a more or less severe form on a farm and the owner to ship animals that have been exposed either ignorant of the consequences or wilfully for the purpose of avoiding losses. Had those animals that were condemned and slaughtered at Kingsville recently been allowed to have been shipped that day the results might have been disastrous at the point of destination.

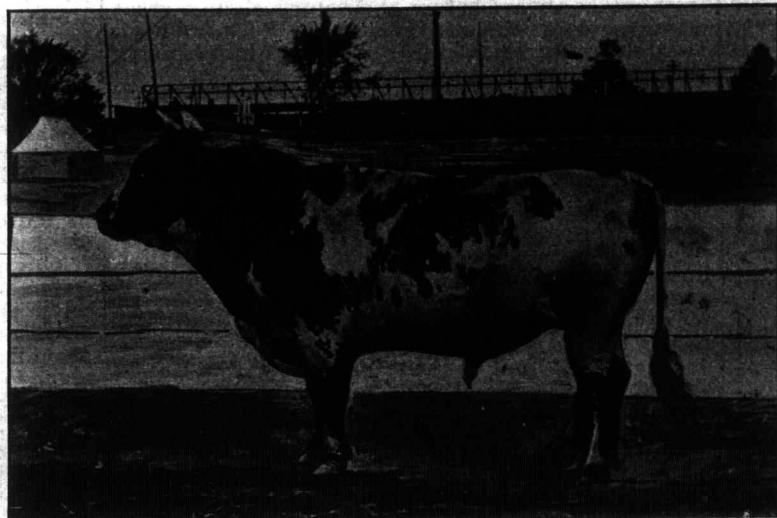
Again, we have fault to find with the local provisions made for those animals at quarantine, for example, at Kingsville, and these owners are not consulting their own interests very much when they neglect to make such animals comfortable, and we would suggest that if a portion of their time employed in obstructing the inspectors were used in improving the condition of such places and making their surroundings more sanitary much benefit would be the result in stamping out the plague, or at least in modifying it. The earlier some one is employed whose duty it is to enforce proper sanitary regulations and keep a close eye over the herds in the affected districts, the quicker we will rid the country of what may develop into a scourge, and until such a decisive step is taken we would suggest that each district be under the supervision of their respective boards of health, which, if they do their duty, will not be lenient with any one who falls short of the requirements of the law.

It is only right to state just here that some of those who have been the heaviest losers in the past have been most hearty in co-operating with efforts made to check the disease. Such action is most commendable.

SANITARY REFORM NEEDED.

Again, as we have before suggested, more attention should be given to the surroundings. All pens should be thoroughly cleaned and disinfected; in fact, all old swine buildings should be destroyed and new ones erected as far from the site of the old

A Great Dairy Sire.



THE WORLD-BEATING LEONARD MEADOWSIDE. OWNED BY J. YUILL & SONS, CARLETON PLACE, ONT.

Leonard Meadowsides—1423—was calved in 1892. He was bred by Jas. Yuill, Carleton Place, and sired by Mansfield—861—. His dam, Lilly of Meadowsides—1737—, was by Rob Roy of Oxford—300—. This noted bull commenced his showing career at an early age. As a calf he won 1st prize at the World's Columbian at Chicago, and as a yearling he won 1st at Ottawa and Almonte. In 1892 his winnings were 1st at Almonte, Ottawa, and the Provincial Dairy Show at Gananoque, and last autumn at Almonte he again won 1st, and at Ottawa 1st and sweepstakes. Such a record has seldom if ever been surpassed, which speaks in the highest terms of the sort of animals Messrs. Yuill breed. We cannot but believe that the practical common sense indicated in Mr. Yuill's contributions which from time to time appear in our columns characterizes his efforts in the selection, breeding, and care of his excellent dairy herd of pure-bred Ayrshires. Leonard Meadowsides is now heading the herd of Mr. A. Barnett, Renfrew, Ont., who was certainly on the lookout for something extra in an excellent breed when he selected him.

which pigs have been fed with portions of ulcerated bowel and killed some weeks after, and *post-mortem* showed beyond any question of doubt that the disease had existed, by the partially healed ulcers in the large bowel, although having shown no decided symptoms of ill-health.

The two forms of disease have been confused, and local trouble has arisen because the conditions disclosed by one *post-mortem* have not been found in another, and yet both were called "cholera." There would seem to be room for some careful and exhaustive scientific investigation at this point to determine definitely if the two diseases are actually present and to shed light upon points which are at present obscure. The hog raiser who is well posted as to the nature as well as the seriousness of these ailments will be most likely to co-operate most heartily in efforts made to eradicate them.

CONDITIONS FAVORABLE TO DISEASE.

In dealing with such a subject as this we deem it advisable to consider the conditions which exist that are favorable to the progress of the disease; and first, we must not overlook the fact that contagion is the first and foremost condition that we must seek to remove in order to head it off and make our efforts fruitful in stamping it out. Again, the surroundings must not be overlooked, and in our trip to Essex Co. we certainly saw places that require the attention of the health boards, and if certain hog raisers do not consult their own interests by attaching sufficient importance to the