

Farmers' Clubs.

Middlesex Agricultural Council.

The regular monthly meeting of this club was held on Saturday, Dec. 19, in the office of the FARMER'S ADVOCATE, the President, Mr. D. Leith, in the chair.

After routine, several new members having been elected, Mr. Henry Anderson, Secretary of the Society, read the following paper:

THOUGHTS ON OUR DRAINAGE LAWS.

It is generally the case in this world that we cannot secure any great advantage of any kind without having to submit to more or less disadvantages. So it is with drainage. The very object of draining is to cause a more rapid outflow of surplus water, thereby causing greater floods in the streams, and in many cases overflowing low lands near the outlets. There is no doubt that the general drainage and cultivation of the land has been the principal cause of the disastrous floods in London West, and the same effects are felt more or less in every stream in the settled parts of the Province.

But there is no doubt that the good done by draining in promoting the health of the people and improving the fertility of the soil, is immeasurably greater than the evils caused by it, and no sane person would think of prohibiting draining on account of the damages that may be caused by the rapid outflow of the water on the lands below. Then the question arises, Have the persons living on low grounds liable to be overflowed, a just claim for damages? In my opinion no claim for damages where the water is conducted in its natural course should be entertained, as their misfortune is the natural and inevitable result of the improvement of the country, and might have been foreseen at the time they chose their location. Land in Canada was not assigned to individuals by lot, the same as the land of Canaan was to the Jews. If it had been the person getting an inferior lot, he would have had a fair claim on the community for compensation. Here every one had a free choice, and if a person chose the rich, level flats instead of high land, it is but natural and right that he should take the consequences.

All agricultural writers and the experience of our farmers show the immense benefits derived from draining the soil. Our Legislature of Ontario have done all in their power to encourage draining by passing numerous Acts with that object, and by appropriating \$200,000 to be loaned to municipalities for that purpose. The Ontario Drainage Act provides for draining swamps and low lands, to be paid for by local rates on the parties interested, the Government advancing the money to be repaid by annual instalments spread over 22 years, at the rate of five percent., or \$7.61 per annum to repay each \$100 borrowed.

The Ontario Tile Drainage Act provides that any township council may borrow from \$2,000 to \$10,000 from the Government, to be loaned to farmers for tile draining, to be repaid in 20 years at the rate of \$3 per annum for each \$100, or a trifle less than five percent. The Ditches and Watercourses Act of 1883 is an improvement on former Acts, as it provides for a Township Engineer to lay out the drains and assess the cost, instead of the fence viewers, and it worked well as long as it was the generally accepted opinion that every man had the right to drain his land in the natural watercourse, and dig just far enough to get sufficient fall without being liable for damages on account of the water flooding land below. Some few held a different opinion, and to settle the question the Legislature of Ontario, at their session in 1884, unfortunately passed an amendment to the Ditches and Watercourses Act, providing as follows:

"Every such ditch or drain shall be continued to a proper outlet, so that no lands, unless with the consent of the owner thereof, will be overflowed or flooded through or by the construction of any such ditch or drain, and it

shall be lawful to construct such ditch or drain through one or any number of lots until the proper outlet is reached."

So, now, before a man can drain his own land he must get the consent and co-operation of all landowners in the course below him. True, he can get the engineer to lay out each one's portion of the work, but Canadians hate to be compelled to do anything, and each one has the privilege of appealing to the judge. Appeals are very common, as it is almost impossible to satisfy people with respect to their share of the work and the benefit, so that if a farmer had a number of land owners on the drain below him, he would most likely give up the drain rather than incur the time and trouble required to put it through according to law. Another difficulty would be to decide what would be considered in law a proper outlet, as it might be claimed that the construction of large drains had the effect of raising the water, even in the river Thames, in time of flood, and consequently increasing the quantity of land overflowed. In fact, if once the principle is acknowledged that a person is liable for damage done by water issuing from his drains, it is almost impossible to say where the liability would cease.

As an instance in point, the Westminster Council were petitioned to construct a drain from the second concession to Dingman's Creek. Accordingly the Engineer made the necessary surveys and estimates, and the parties interested were very anxious to have the drain made, as it would drain a large tract of land at present useless. But a party living on the creek employed an eminent legal gentleman of London to attend the Council and protest against the drain, and he gave notice of an action for damages if it was made, on the ground that Dingman's Creek was not a proper outlet and that the drain would cause an overflow of the flats. To those not acquainted with Westminster, I may say that Dingman's Creek is a large stream rising in Dorchester, running through the whole width of Westminster, and is, in fact, the only outlet for the water of one-half of the Township. I do not think it likely in the case of this drain that they could have proved any damages, but with the natural horror that most farmers feel for lawyers and lawsuits, it was decided to relinquish the drain rather than risk it.

To facilitate draining, and to avoid numerous vexatious lawsuits, in my opinion, the amendment of 1884 above recited should be repealed, and an amendment substituted distinctly recognizing the principle that every man has the right to drain his own land in the natural watercourse, without being in any degree responsible for any damage the water may do below him. This was generally understood to be the law, and was the principle always acted on in this Township, at least, until the amendment of 1884 deranged the whole affair.

There is a very large amount of tile draining done, there being no less than five drain tile factories in operation in Westminster. This is all done by farmers at their own cost, and as the land is generally rolling, the majority can get an outlet on their own land, and consequently drain independently of the law. But where a man has to cross his neighbor's land to get sufficient fall, the amendment of 1884 is found to be a great detriment, and in some cases has prevented the making of the drain.

A member.—Does the Act which provides for the drainage of swamps require that the money be borrowed through the municipalities, the same as is provided by the Tile Act?

Mr. Anderson.—Yes.

W. A. Macdonald.—I wish to draw the attention of the members to a statement in Mr. Anderson's paper which is very apt to be misconstrued. I refer to the action of drainage upon floods. The question has been discussed threadbare, but I think it should now be regarded as settled. Tile drainage prevents floods, inasmuch as a drained soil will absorb all the water from ordinary rains, and if there

be a surplus, it does not usually reach the outlet of the drain until the flood has partially subsided. With regard to open drains, however, especially those which drain basins of water that would otherwise go off by evaporation, or find its way into underlying springs, Mr. Anderson's remarks have considerable weight. If we have more floods now than formerly, I think it should be attributed to the removal of our forests, and not to drainage. When we speak of floods we mix up floods from the clouds with river floods. Tile drainage prevents the latter, and forests the former, as a rule.

Several members expressed their appreciation of Mr. Anderson's paper, and a hearty vote of thanks was tendered to him. One member said he could never get at the true inwardness of the drainage law. He went twice to a lawyer for advice, but still could not comprehend the situation until he heard the Secretary's able paper. Several members mentioned the pending of a number of vexatious lawsuits under the Drainage Act of 1884.

A resolution was unanimously passed to the effect that the Drainage Act of 1884 should be repealed.

EXPERIMENTS WITH POTATO ROT, AND THE ACTION OF FERTILIZERS ON THE YIELD OF POTATOES.

W. A. Macdonald delivered a lecture on the above subject, but we have only space for a synopsis. He said he had tested 15 brands of fertilizers, but his main object was to ascertain what constituents of plant food his soil was deficient in. In some instances he made over a thousand percent profit in the money he invested in fertilizers, while in other cases he lost several hundred percent. By loss he meant that the fertilizers used produced a less yield than where no fertilizer at all was applied. He produced a bottle containing a sample of the soil in which the potatoes grew, a mechanical analysis having been made by separating the clay from the sand by means of water, the soil showing about 60 percent of clay and 40 of sand. He showed, through a magnifying glass, that the sand was not all sand, but contained fragments of felspar, granite and other alkaline rocks, and said that this was the reason why the potash fertilizers produced a loss, the soil being already too rich in potash. The soil was evidently deficient in phosphoric acid, for the phosphates, even when applied alone, produced profitable results. He believed that most all the soil in the Province was deficient in phosphates. He said that Canadian phosphate rock was the purest in the world, that over \$500,000 worth of it was shipped annually to England, which was a sad commentary on the intelligence of the farmers of Canada. Even in the city of London phosphate fertilizers were sold at \$10 per ton less than the regular market price, and yet very few farmers took the pains of looking at them. He then spoke of the action of fertilizers on the potato rot, saying that farmyard manure produced twice as much rot as the average of the fertilizers, but with regard to the contagiousness of the disease, his experiments were not yet complete. Of the dozen varieties of potatoes tested, the newest resisted the rot best, and one variety appeared to be perfectly rot-proof. He pointed out how he had discovered frauds in the naming of the varieties of certain potatoes and other vegetables. Referring to the much discussed question that "Tillage is manure," he produced specimens of soil which would be benefited by a large amount of tillage, and other specimens which would not be so benefited.

The program for the next meeting will be the reading of a paper on "Apples and Apple Markets" by the President.

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