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EDITORIAL.

Lightning struck early this year.

With all respect to the dogs, we submit that it is absurd, in view of the rabies contagion, liable to break out anywhere, to accord them more privileges than lunatics.

Beware of Western seed oats. Prof. C. A. Zavitz tells us he counted 147 wild oats out of a three-ounce grade sample from the office of Inspector Horn, in Winnipeg. Sow the wind, and reap the whirlwind.

One dollar and seventy-four cents per ton is Mr. Fixter's estimate of the cost of growing corn for ensilage on Macdonald College Farm, counting rent of land, manure and labor. No wonder he declares that "corn is king."

Eight, nine, ten dollars for live hogs, and prices still going up. Quotations ranging from \$10.15 to \$10.50 were reported from five leading American points the first of last week, surpassing, in many cities, Civil-war figures. Where will it end?

Here is a good debate for some of our Farmers' Clubs: Resolved that selection from the best varieties existing is a more promising means of crop improvement than hybridization. Debaters who will read up carefully on that subject might discuss it with great profit to themselves and their audience.

If it can be shown that a farm wood-lot, besides its numerous aesthetic, climatic and other benefits, may be expected ultimately to return in fuel and timber fair annual compound interest or rental on the value of the land, surely no more need be said to persuade every farmer to leave ten or twenty acres of his land under trees, or to reforest, if already cleared.

Hogs have gone up since the agitation for increased duty on pork was begun. If the duty had been raised, the increase in price would have been triumphantly claimed as an inevitable effect of the increased duty. The fact that it occurred without any change whatever in the tariff, illustrates how easy it sometimes is to construe coincidence as cause and effect. Jumping at conclusions is not logic.

Is this Provincial trunk-road project in the farmers' interest, in the general interest, or in the interest of a certain privileged class? Build the trunk roads, but not with public money. Make the automobile tax or license fees pay the whole cost. Autoists profess willingness to contribute thus to the upkeep of the roads. Take them at their word. Build motor roads with motor taxes, and with those alone.

Not enough attention is being directed to the upkeep of back-line earth roads in townships where gravel is not found. In this connection, the statement of W. B. Rittenhouse, Lincoln Co., Ont., at the Good Roads Convention, that at an annual expense of from \$5 to \$10 per mile, such roads could be maintained in excellent condition, is well worth considering. Faithful use of the split-log drag is the means recommended.

The tables have turned. Canada now holds the whip hand in international tariff negotiations with her Republican neighbor.

The man who declares that farming does not pay decent interest on the capital invested is usually the most resolute skeptic of farm forestry as an investment. The double-acting philosophy by which a man reasons in one breath that wages, risks and general expenses of cropping leave scant interest on his acres, and in the next breath declares that farm forestry is unprofitable because it does not yield an annual income equal to the gross value of a crop of wheat, must be an outcome of one of those profound mental processes which ordinary intellects can hardly hope to understand.

Public levity over the dog-muzzling and confinement regulations is giving way as the grave condition in regard to hydrophobia, in Western Ontario is becoming known. The pitiful case of a boy in Wentworth County, who died from rabies contracted from his pet dog, is only one of many disturbing developments. The existence of rabies is no illusion, and the dog-muzzling regulations are no joke. We sympathize with the dogs which have to wear muzzles, but, after all, it is kinder to the dogs themselves to muzzle them than to submit the whole animal and human tribe to the danger of such a frightful contagion as rabies. Thorough measures are the only price of safety.

An intelligently written, very interesting and suggestive letter has been received from a Wellington County (Ontario) subscriber, who submits the results of his experiments with fertilizers for potatoes and turnips. In his case, acid phosphate (or superphosphate) has given marked results on both crops. That it should have done so with turnips, is not extraordinary; the potato experiment is rather surprising. We echo his request for the experience of others who have used fertilizers. Barnyard manure is by all odds our best fertilizer, so far as it goes, but it does not always go far enough, and the day is coming when more Canadian farmers will employ supplementary dressings of artificials, especially to the more intensive crops, such as roots, fruits, vegetables, and the like. There are a great many interesting questions each farmer might be putting to his soil. Hands up, those who have answers ready!

A European scientist, Prof. Metchnikoff, claims to have discovered that a diet of specially-prepared sour milk has great health-giving properties, the lactic-acid bacilli abounding in it being deadly foes of the putrefactive and disease-producing bacteria which abound in the large intestine. By a strange coincidence, Prof. W. R. Graham has found this winter, in an experiment with rations for laying hens, that the lot receiving buttermilk along with the usual grain ration yielded the largest profit per bird, looked the healthiest, and laid eggs with greater hatching power than those from birds receiving beef scrap or bone meal, being exceeded in this respect only by the lot which had neither meat food nor milk, this latter bunch standing second to the last, however, in point of profit on egg yield. While warning against premature conclusions, Prof. Graham believes that in buttermilk he has found an excellent regulator and corrective, a means of keeping the birds healthy when brought in off the range, and possibly an effective means of coping with white diarrhea. At any rate, he has fed buttermilk liberally this winter, and never had as high fertility before, nor as good health among the birds.

The Problem in Cereal-plant Breeding.

At the Canadian Seed-growers' Convention in Ottawa, last month, a superficial observer might have inferred that our cereal hybridists had accomplished little, compared to the work of a Burbank or a Groff. Inquiry would reveal that the most difficult work of the cereal improver begins where the hybridist of flowers, fruits and trees leaves off. The worker with plants that can be reproduced by vegetative processes, as from tubers, cuttings, scions, runners, and the like, has a comparatively easy task. Once hereditary characters have been broken up by crossing and recrossing into an infinite variety of types and characters, it is only a matter of selecting from them the individuals which are considered most valuable. These then may be reproduced faithfully by any one of the means indicated above. They come true to type because the scion or cutting is a part of the parent plant, just as a finger is part of one's body. With a seed, however, and especially a seed produced by crossing two parent plants, it is altogether different. It may produce almost anything, and in the case of plants that must be reproduced from seed, as with grain, for instance, the plant-breeder must go on selecting and reselecting, one generation after another, until a new variety has been established, with all its characteristics fixed, so that it will reproduce true to type generation after generation.

We have in Canada two men who are doing important work in hybridization of field crops: Dr. Chas. E. Saunders, at Ottawa, and Prof. C. A. Zavitz, at Guelph. Dr. Saunders is devoting himself especially to wheat, continuing the work begun by his father, Dr. Wm. Saunders, one of the first men, if not the first, in America to take up this line of work. Dr. Saunders' special aim is to secure an early, good-yielding and good-milling variety of spring wheat for the West, and in this respect the Preston is a notable achievement. The Preston, we believe, was first sent out by Dr. William Saunders before its characteristics were firmly fixed, so that it exhibited diverse characteristics. Dr. Chas. Saunders recalled it, and grew it at Ottawa until he was sure it was a dependably true variety. It is now raised with satisfaction by some farmers in the West, in districts subject to early fall frosts, ripening several days ahead of Red Fife.

In the Field Husbandry Department at Guelph, under Prof. Zavitz, a great deal of valuable work has already been accomplished in both selection and hybridization. Prof. W. M. Hays, United States Assistant Secretary for Agriculture, who visited Guelph last summer, said, on leaving: "You are doing more here at this place in plant-breeding work than anywhere else in America, except, perhaps, the Minnesota Station, and your work is finer and more thorough." In selection, the No. 21 barley has been developed from Mandchouri, which it outyields. Likewise, the highest-yielding winter wheat grown on the plots at Guelph is one that has been originated at the College by selection from Dawson's Golden Chaff. It is not, however, ready to send out to the public. Besides these and other triumphs in selection, the following, among other important results, have been attained through hybridization. The highest-yielding variety of oats on the plots last year was a hybrid of Siberian and Joannette. The finest-appearing and thinnest-hulled oat out of 250 kinds grown on the plots was another hybrid produced from the same parents. This variety shows less than 21 per cent. of hull in the average of three years' determinations, as compared with 30.4 per cent. in the Siberian. Similar work has been accomplished with various other farm crops. It