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EDITORIAL.

Don't miss the series of articles on breeds of live stock now running through our columns. To many it alone will be worth the yearly subscription price of the paper.

From Nova Scotia, Amherst echoes Guelph's experience: More room provided for the Winter Fair, but still more needed. What lusty youngsters these two young institutions do be! The Winter Fair idea has a great future before it.

The United States is trying to check the movement of her farmers to Canada's fertile, undeveloped lands, but Canadian opportunity is a magnet that will continue to draw, automatically sifting the immigrants, attracting only the hardest and best.

It is a trite saying that the possibilities of an acre are yet unknown. How to make them better known, or measurably realized, is the object of the smaller-farms-essay competition. We are seeking knowledge from the men who know—those who have done things. What can you contribute?

Three Provincial Fruit-growers' conventions, two Winter Fairs, and sundry other events, made claim upon our space and reportorial resources last week. Many of the reports necessarily came to hand at the last minute, involving much planning, excision and condensation to even make note of all. And yet there are those who think editing must be a snap! The majority of people little realize, when reading a regular, not to mention a special issue, how much thought, labor and expenditure it represents.

Straws indicate how the wind blows. The Ontario Winter Fair is one of those worthy institutions which draw chiefly the better class of farmers. At the one just held, a subscription solicitor, working in the interests of "The Farmer's Advocate," kept track for a few hours one forenoon of the proportion of people met who were already getting the paper. Out of 174 men approached, 168 stated that they were already receiving it, and of the remaining six, five were induced to subscribe. What a magnificent uplift would be given to Canadian agriculture if every farmer were a regular and careful reader of "The Farmer's Advocate"!

Speaking at Guelph, Dr. Rutherford again reminded his hearers that breeders of pure-bred stock, the class of men who ought to be most interested in the fight against bovine tuberculosis, were the ones from whom most troublesome opposition was encountered. This is deplorable. While much faddism and extremeness has been given play in connection with tuberculosis and the tuberculin test, still tuberculin is the best means of diagnosis we have, and should be resorted to, in conjunction with healthful conditions and wise breeding, with a view to eradicating the dread disease from our herds and keeping it out. Every stockman can and should do this voluntarily in his own interest, apart, altogether, from anything the law may compel. It is not good business to harbor tuberculosis, and neither patriotic nor honorable to knowingly or carelessly disseminate it throughout the country on purchased breeding stock.

Administration of Drainage Laws.

Recent correspondence received by "The Farmer's Advocate" has voiced very prevalent dissatisfaction with the administration of the drainage laws in the Province of Ontario, both the Ditches and Watercourses and the Municipal Drainage Acts. If the laws themselves are imperfect, it is not for want of repeated consideration and amendment, because no session of the Provincial Legislature passes without a grist of bills to amend these statutes. The principal trouble seems to be with the unsatisfactory character of the awards made by so many of the engineers when called in under one or the other of these Acts, particularly the former.

The difficulty lies in the fact that extremely few engineers are experts on drainage. The School of Science, Toronto; the School of Mines, Kingston; the Royal Military College, Kingston, and the Department of Engineering at McGill University, have courses in engineering, but not one of these, we believe, give any instruction on the subject of drainage, although graduates of these institutions are the very men called upon to administer the drainage laws of Ontario, making surveys and awards involving interests amounting to thousands of dollars. It is no particular discredit to these colleges that they do not give a course in drainage, because, while the drainage-award business looms large from the agricultural point of view, it is insignificant from the engineering side; hence there has been practically no demand for the subject in the engineering course. When it is borne in mind that drainage is an intricate science, on which a trained man might specialize for many years without fear of exhausting the subject, there is small room for wonder at the unsatisfactory nature of the awards made by so many engineers, who, for instance, have often been known to direct the excavation of inconvenient, unsightly and expensive open ditches where covered drains would be far better.

What, then, is to be done about it? The Department of Physics at the Ontario Agricultural College has for the past five years been making and mapping out free drainage surveys for farmers in all parts of the Province. The work has given great satisfaction, and has grown enormously. The experience thus gained, together with the study of drainage problems and laws, has made Wm. H. Day, Professor in charge of this Department, probably the best land-drainage expert in Canada. Why should his knowledge and the staff and resources of his Department not be utilized in settling disputes and problems under the Ditches and Watercourses Act, as well as the Municipal Drainage Act? Such a plan would insure competent and uniform administration all over the Province. Then, again, the making of awards and allotments of costs is sometimes a very delicate matter for a local engineer, resident in the locality, whereas the impartiality of an outsider would be less likely to be questioned.

Even as the law now stands, the Department of Physics could, if necessary, act as official referee of all drains constructed under the Ditches and Watercourses Act, because the employment of a licensed engineer or land surveyor is not obligatory, anyone "capable of doing the work" being a qualified engineer under that Act. Under the Municipal Drainage Act, however, the law, as it now stands, requires the employment of an engineer or land-surveyor, so that if the work outlined above were ever put in charge of Prof. Day's staff, one of two things would have to be done. Either the Act would need to be amended, or a qualified engineer or land-surveyor attached to the Department of Physics. There would be many difficulties to

work out, but it does seem that, before the drainage laws of Ontario are properly administered, some such central supervision and expert administration must be secured.

O. A. C. Drainage Surveyors.

While on the subject of drainage, it may be well to explain the status and qualifications of the men sent out by the Department of Physics, at Guelph, to do drainage-survey work. There is a more or less current impression that these men are engineers, and on a few occasions, when some of them have corrected the people they were with, there has been a perceptible loss of prestige. It is often so: the man possessing a handle to his name very frequently gets taken for more than he is worth, while the plain, unassuming "Mr." is set down as a common sort of fellow, whose opinion need not command any especial respect.

Fact of the matter is that, while the drainage surveyors are not qualified engineers, they are far more competent for the particular work in which they are engaged than most of the engineers would be, for the latter, as explained in the foregoing article, are not trained in drainage, except in an incidental way. On the other hand, the O. A. C. students get two courses in drainage, one in their second year, and one in their fourth. The men who go out as drainage advisors are chosen almost exclusively from the outgoing second-year class. Before being put in the field, however, they are given another course, even superior to that given in the fourth year. They are required to go out and make surveys on their own responsibility, under supervision of the Physics Department, and subject to its checking before being asked to make surveys for the public. Thus, it will be seen that the College men have both the theory and practice of draining well in hand before they are sent out, while, of course, they accumulate further experience with practice. It is not surprising, therefore, that their services have proven so valuable, and have been in such increasing request.

Sensible Care of Stock.

A coddled beast is about as much to be desired as a mollicoddle man. A certain amount of rigor habitually endured toughens both moral and physical fibre, developing that hardness or resisting power which guarantees ability to withstand adversities. Continual protection from severe temperatures enervates the system, lowering its resisting power and preparing the way for inroads of debility and disease, if not in the first generation, then in the second, third or fourth.

Prof. H. H. Dean talked some sound sense in his lecture at the Winter Fair, Guelph, when advising against too close housing of dairy cattle. Fresh air, sunlight and outdoor exercise are three boons which every animal should enjoy. Continuous confinement from autumn to spring is unwise. Cattle are the better for exercise, and should have it almost every day. In this connection he asserted a belief that it is a mistake to have water in the stable constantly before the stock. Better turn them out twice a day to drink cold (though preferably not ice-cold) water in a sheltered spot. One function of water, he explained, is to relieve a feverish condition of the system produced by high-feeding and activity of the vital organs. Cool water, he argued, is better to relieve this condition than warm water; besides which, on being turned out, stock have a chance for regular exercise.

While not certain that Prof. Dean is right in his surmise that cold water is more palatable to the cow than water approaching a tepid temperature, we do think it is better policy to water out-