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EDITORIAL

The fool and the faker still manifest the same affinity for each other as of old.

Examine the label on your "Farmer's Advocate" once in a while. It will tell you whether your subscription has expired or not.

A new poultry building and a large amphitheatre for the judging of live stock, are two real needs of the Canadian National Exhibition.

The animal which receives the prize may not always be the best, but it gets the mention and most of the renown.

Discovery of the earth's crown sets a new task for the plant-breeders. It devolves upon them to hybridize a lichen that will flourish on Arctic ice. After so much effort to conquer the polar region, some productive purpose for it must be found.

In some districts where silt-filling usually follows closely on wheat seeding, but was delayed this year on account of late corn planting, farmers were doing their fall plowing until corn got ready. That is taking time by the forelock, the best end surely.

Time was in this country when the prevailing conception of a farmer was that he was an individual to be "farmed," to the commercial advantage of other classes. To-day his true position is recognized as that of a skilled worker, a business manager and a scientific manipulator of the forces of nature. There is no more dignified, independent, honorable or more interesting occupation than the intelligent pursuit of agriculture and stock husbandry.

The great clay belt of Northern Ontario has been again visited by a number of Provincial Legislators in a body, who speak in unmeasured terms of the possibilities of that great district of fifteen to twenty million acres. The pasture lands are wonderfully fertile, and splendid samples of grain and vegetables were seen. With a horse, and block and tackle, stumps can be pulled up at once, and the timber alone pays twice over for the work of clearing. To quote the words of one of the visitors, "In twenty years, Northern Ontario will be the agricultural wonder of the age."

Some people seem to be always in a hurry, and yet are always just a little behind time. They are late for church, late with their work, and, if going on a journey, almost too late for the train. With some there is good reason for this state of things; they have too much to do. The present scarcity of farm help is responsible for a great deal of the extra rush which has, in many cases, become chronic. But that is not the only reason; nor, indeed, the chief one. On the farm there are many kinds of work, which, done in proper season, take much less time than if left until a little late. For instance, allow a corn field in the early stages to go a month without tillage and it will require three times the amount of work to get it clean that it would have required if taken in time. The same is true to a certain extent of almost every kind of farm work that may be mentioned. The main reason for much of the hurry and the being always late is that the start is not made in time.

Instrumentality of Farmers' Clubs.

Prof. L. H. Bailey, and many other leading thinkers present at the last annual meeting of the American Association of Farmers' Institute workers, emphasized the importance of local organization of farmers as a necessary means of effective assistance. It was urged that such organizations should not cover too much ground. A local farmers' club, devoting itself to the special needs of a particular district, with its own members interested and actively participating, will accomplish much more than effort aimed at the masses from above. The helper is usually himself most helped. The speaker gets more out of his address than any of his audience, particularly if he has devoted care to its preparation. The writer profits more by his writing than does anyone who reads his article. Development comes through expression. Such an organization as a Farmers' Club, which draws out the individual members, getting them to take part in addresses and discussions, will profit them greatly, cultivating a receptive and investigative turn of mind, correcting erroneous ideas, tending to accuracy and preparing for further enlightenment, further search after knowledge and a desire for further help. The great need is to grip the people who have not up to date taken much interest in College, Experimental Station and Farmers' Institute work, and the Farmers' Club, or something of its kind, promises a partial solution of this difficult problem. The movement makes steady progress in the Province of Ontario, while effort with a similar end in view has been set on foot in various States of the Union. Something of the kind is needed in every Province and State.

Plowing.

Why do we plow? The remark of a city-bred Englishman, that, "The main objection he had to farming was that the land was naturally wrong side up, and before crops could be grown it had to be inverted," is one answer, with a slight grain of truth in it. Plowing is done on grass and clover sod, or other land on which there is roughage, in order to bury and rot the sod, and to bring up from below soil that can be prepared for the reception and growth of seed to be sown. Land in other conditions may be surface-worked into a fit state to receive seed, but where a tough sod exists this is practically impossible. It must be turned under. With all the advance made in various implements of tillage, there is none that can take the place of the plow for this purpose.

Again, plowing is done to stir and pulverize the soil. It is true that, while plowed ground is stirred at once, it is not always immediately pulverized, but pulverization of the lower few inches continues by means of the slow settling of the soil by gravity, and by the surface-working and consequent trampling which it receives.

This stirring and pulverizing of the soil is beneficial in many ways. Ground that is left untouched for years becomes compacted, and not in good condition for the spread and growth of plant roots. Loosened and made fine, roots and root-hairs penetrate it easily, and find in it a much greater surface on which to feed.

In the second place, it aerates the soil. A certain amount of air is essential for the growth of all plants usually raised on a farm. The roots cannot live without air, any more than can those parts which are above ground. The oxygen of the air has also a chemical action upon the mineral matter of the soil, tending to make it more soluble. The organic matter present in all soils is acted upon by bacteria which change the insoluble compounds in which nitrogen is stored, and convert them into the form of soluble nitrates; but these beneficial bacteria cannot live

without oxygen. Aeration, therefore, is necessary for their best work. Soils that are loosened only on the surface lack in part the advantage which comes from occasional deeper tillage, and consequent thorough aeration.

In the third place, loosening the soil increases its capacity for holding moisture. During a shower, pools will form on a gravel road at once, while on a plowed field the rain is absorbed and held. It may be wise, for other reasons, not to plow deeply, but, so far as water-holding capacity is concerned, the deeper it is stirred, the better. This question of the retention of soil moisture, while important everywhere, is all-important in the semi-arid regions of the West. H. W. Campbell, an expert in dry-farming, as it is called, recommends for these regions, in order that soil moisture be conserved to the fullest extent, the plowing of the land every fall. He uses, also, what is called a sub-surface packer, which fills up air-spaces at the bottom of plowing. This implement consists of a number of spoked wheels set a few inches apart on a shaft resembling a roller shaft, the metal rim of each wheel being wedge-shaped; that is, the outer edge is sharp, and rim thickens from the circumference inwards. His order is first loosen, then pack, then harrow the surface.

Plowing is necessary to the maintaining of soil-depth. Under cultivation, the surface soil slowly but surely wastes, as all will have noticed. The proper depth of soil for best results differs, according to the character of the soil, no doubt, but that a certain depth is necessary, will not be disputed by anyone. If the waste of soil goes on, how can depth of loam be maintained, except by bringing up from the subsoil a little occasionally to become incorporated with the layer above?

This brings us to the question as to the proper depth to plow. Plowing to the depth of seven or eight inches used to be considered an indication of good farming, but of late years there has been a decided change in opinion and practice. Shallower plowing has become common, many advocating a depth of but four inches as being about right. On sandy soils, with porous subsoil, it is well, doubtless, to keep humus as near the surface as possible, so that loss by leaching may be minimized. Where soil is heavier, and subsoil more compact, however, it is to be doubted whether too much emphasis has not been laid on the merits of shallow plowing. There is a growing feeling that such has been the case, and that a depth of at least six inches is not too great; some would say not nearly great enough. A firm underpan, with shallow soil above, is not the best combination to withstand either wet or dry weather.

Several letters have appeared in "The Farmer's Advocate" lately on after-harvest cultivation of stubble-fields, and the writers nearly all agree in recommending shallow plowing in early autumn, to be followed towards winter by another plowing much deeper. All agree, also, that the later fall plowing should be left as open and as rough on the surface as possible, so that the frosts of winter may more readily act upon it.

Now and again there is a slight agitation in favor of reviving the plowing-matches, which at one time were so popular. The changes that have taken place in the styles of plows make it unlikely that they will ever become common again. Instead of the long plow that would slowly turn a narrow furrow, and set it neatly on edge without breaking it, a shorter, more curved mouldboard is used, turning a wider and more broken-up furrow, which is better, but does not look so neat, and would not show so well at a match. The intro-