* AGRICULTURE, STOCK, DAIRY, POULTRY,

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WINNIPEG, MANITOBA, JUNE 20, 1901.

No. 528

The Improvement of the Country Road. In a young country, the roads receive but little attention as a rule, and in many cases fortunately so, for we have seen it where, after the tinkering generally dubbed "statute labor," a fairly good trail has been spoiled and the last state of the road was worse than the first. It may be assumed that roadmaking and road repairing are done in order to have those roads in the best shape for spring and fall travel, consequently there are a few primary rules to be observed. Hills should be cut down and the hollows filled up as far-as is practicable. The more the surface is improved, the more the grades should be reduced. The construction of an embankment (or grade, as it is often termed) through a low spot calls for careful work. The earth should be deposited in layers so that it will settle uniformly. When the scraper is used each scraperful should be levelled down, otherwise the settling will be uneven and hills and hollows will be left; the latter will fill with water when rain falls, and the mud resulting will be disagreeable, increase the draft, and will result in material being carried out of the low spot, just the opposite to what is wanted. The use of the harrows and a heavily-weighted roller on the road as each layer is deposited will tend to firm and harden it. No road can remain good for any considerable length of time without good drainage. Drainage of roads may take three forms-underdrainage, side ditches, and surface drainage. Given a dry subsoil and the first may be dispensed with. There are spots, however, in which the use of tile would be very beneficial. It is no use to gravel or stone a road unless the underdrainage is good, otherwise the hard material will eventually work down in. In places kept soft by a spring, a line of tile along the side of the road will be more useful than if the height of the grade is increased. Side ditches are to take the water from the roadway, also to prevent any coming on to the road from the sides. They should in all cases be constructed so as to take the water away quickly. The digging of a ditch in a low spot, making it a sort of open cistern or pond, is a very had scheme, as the water from it will be continually soaking into and spoiling the grade close to it. Side ditches need not be deep, but should have a broad flaring side to the road, and should have a good outlet, as no good road can be obtained if the ditches are canals, holding the water until it dries up. The road machine, or grader, is the best implement for this work. Side ditches are essential where a hill is cut down to make the road. The steeper the side, the greater the need for a good side ditch at that side, so as to prevent the water washing the road or taking the center of the road for it. Surface drainage calls for a knowledge of the construction of what is termed the conven, which should be 12 inches in 25 or 30 feet. The smoother the surface is kept, the less the crown required. A crown can be too great, with the result that the travel is entirely in the center of the read or that the side slopes wash heavily. If sods are put on the road, they tend to work up into a tide on the center. They should be torn to pieces and levelled with a harrow. The maintetrance of the road may be summed up as follows: To get rid of the water as quickly as possible, by keeping the surface smooth and the side ditches open. In some parts of this Province the road allow ance has been cultivated and then let run. In all such cases seeding down to grass should be childred: unless so done, a road may become a verifiable nursery for weed seeds. The construction a calverts calls for considerable attention. The be of wood for such purposes is not an up-to-date .od. Far better are the tile or cement ones. The municipalities and the C. P. R. are using tile ensively. In Ontario, the Road Commissioner amends cement culverts, which can be cond by any one by the use of molds of spring which can be secured at a foundry for from

\$8 to \$18, according to size. The molds are composed of an outside casing resembling a stovepipe, and are two and a half feet long; the inner being less in diameter, so as to leave a space between the two of about four and a half inches. In addition to the above means of keeping roads in good shape may be mentioned the use of wide tires, three inches or upwards on heavy wagons.

The Educational at the Fairs. It is no uncommon occurrence to read, after the fairs are over, severe strictures on those institutions. their methods, side shows, etc. It is, however, encouraging to note that the two leading fairs of the West, namely, the Industrial and Brandon, have made a move distinctly along the educational line. The success of their ventures depends, of course, entirely on the attitude taken by the farming community. If the entries are large, the directors of these fairs will feel encouraged and will doubtless develop this laudable work by the addition of more money for competition. The dairy competition is not entirely new, and will, of course, be the province of the young women of the farm, although men will likely be numbered among the competitors. Those having had dairy-school training will be, or should be, the better fitted for the competition. The Brandon judging competition is the initiatory one for the Province, and deserves special mention. The competitors' work will probably be crude, as it is well known that while many will pick out a good animal, fewer will give satisfactory reasons for so doing. In this connection we might point out the utter lack of opportunity for the average young farmer to learn stock-judging. No agricultural college, no judging institute, and seldom a judge who explains his awards in the ring, renders it, to say the least, difficult for a young man to become a judge of live stock or even obtain the rudiments of the art and science of live-stock judging. The forward movement set on foot at the Wheat City is bound to have good results, and will doubtless be of such benefit to the competitors and of so much interest to the onlookers that they will call for a judging institute, which, once obtained, will be the forerunner of the much-to-be-desired technical college. It must not be forgotten that those to be people to make the demand for such branches of education along agricultural lines. The farmer of to-day must be a reader, a thinker, and an observer.

Two Good Points in a Stable.

As building time is now on, the points referred to should be provided for before it is too late: Light and ventilation are two of the prime essentials in the proper equipment of a stable. There is a medium in everything, of course, and no one would expect to find a stable as well lighted as a drawing-room: but between this and the dark, stuffy apartments which are sometimes made to do duty for the accommodation of horses there is a very great difference. In addition to being conducive to greater purity of the air present, light is known to be inimical to many of the germs which cause disease in all classes of farm animals, the two great enemies of such bacteria being light and fresh air. Faulty as many stables are on the score of light, even more of them are deficient on the score of ventilation. No one requires a stable to be an apartment through which a continuous rush of fresh air is passing from one end of the day to the other, but there should be ample provision in all stables for the egress of the vitiated atmosphere which rises towards the ceiling when animals are kept in the house for any length of time. It is the escape of this vitiated air, rather than the necessity for a great inrush of fresh air, that is of the most consequence in stable ventilation

If rhubarb be thoroughly washed in pure water, cut into pieces, put into jars, covered with pure, cold water, and screwed up and put aside in a cool, dark place, it will keep. The acid is so severe that there is no danger of either the yeast plant or bacteria interfering with it.

Attend the Institutes.

It seems almost superfluous to recommend our readers to attend the Institute, and yet, judging by the small attendance at some of them, it is evidently necessary. We had occasion to refer to the judging institute in our last issue. Another feature that, if introduced, would meet with favor would be to have some lady speakers. In Ontario, Miss Laura Rose, O. A. C., and others have been on the Institute force for years, and the attendance at such Institutes runs up into the hundreds. There is no reason why a few talks by a practical woman on butter and bread making, simple methods of cooking, the building of the home and its convenient arrangement, ventilation, dress, gardening and poultry-raising should not be introduced into our Institute lectures. Where the women attend, there the men flock-quite an old truism, unless we except in some cases the church, and even there the young men are often to be found at the doors, if not inside. The women need relaxation as well as the sterner sex, so that we are in hope that the Department of Agriculture will be fortunate enough to secure a lady speaker for the Institute series. Mrs. Virginia Meredith, a cultured lady and noted stockbreeder, south of the boundary, also preceptress of the school of domestic economy at the Minnesota Agricultural College, says that she believes "the reason why men and boys leave the farm is due to difficulty of getting wives who will take hold of the work and be up-to-date in their methods; the girl prefers to be behind the counter, bedecked with ribbons, etc." So give the girls a chance.

Farm Siftings.

Did ever strike you that the school teachers are mainly of the female persuasion? Not a good thing for the country, by any means. If we want virilty as a characteristic of our people, we must have virile teachers. The ladies are all right in their place; the teaching profession would be better did it number more men in it. Do your trustees offer a good enough salary to get a good enough teacher? One hundred dollars a year in a district may mean the difference between a good and a bad educational investment. A good teacher should be kept and the salary increased to keep him with you. life and character are too valuable to allow experimental work by an inexperienced teacher or one of weak character.

Every district seems to be after new railroads; those that have none, of course, are pushing their claims; while those that have one line, want two, so as to have competition, so 'tis said. A good deal of the money voted to railroads might better be used for an agricultural college. There would be fewer disappointments and better financial returns if such were done.

Institute meetings will be held shortly, and the Department will have out speakers. Go to the meetings and make a lively discussion. If the speaker is only a party hack, go and prick the bubble. If. however, which is more likely to be the case, the speaker is a practical farmer, go and glean knowledge from him and assist him to gain some. A capital suggestion in the ADVOCATE a short time ago was that a judging institute should be held. It would be a novelty certainly, but I presume would be instructive.

The papers state that Lt.-Col. Dent will be here purchasing horses. When fitting horses for sale, do not clip the foretop. Such a procedure will mean a cut in the price. Do not dock your horses, whether they are workers or for sale.

Creamery operators (some of them) need a pointer or two. A short time ago, while watching the working of the butter in the home creamery, a piece of but terfell off the worker onto the floor. It was immediately picked up and worked into the butter mass and now I sigh for oleo. INTER PRIMOS.