

The Road Drag in Maintaining Earth Roads

It does not matter how well drained and graded an earth road may be, if the maintenance is neglected, a large amount of the money expended on construction will be lost, and the benefit will not be derived by the taxpayers for the amount invested. The earth road is by far the most common type of highway in this country. Its cheapness in comparison with other types of construction, and the absence in many sections of our country of stone, gravel and other hard materials for road building will render its use necessary for many years to come.

The split-log drag is of great service on roads of this class. It is now coming into general use in Manitoba, and its adoption in most localities where there are earth roads will doubtless increase the construction and use of the drag. Two mistakes are commonly made in constructing the drag. The first lies in making it too heavy; it should be so light that one man can easily lift it, besides a light drag responds more easily to various methods of pitching and to the shifting and weight of the operator, both of which are essential considerations. A drag can be made heavier at any time by proper weighting.

The other mistake is the use of square timbers instead of those with sharp edges, whereby the cutting effect of the sharp edges is lost, and the drag will glide over instead of levelling the irregularities on the surface of the road. These mistakes are made because of badly constructed drags and also the wrong idea that a large amount of dirt must be moved at one time.

To construct a drag is almost more simple than to describe it, for the implement is simplicity itself. A log from 5 to 8 feet long and 8 to 12 inches in diameter is split in half. The halves are placed parallel to one another, the edges down and the flat face to the front. They are firmly braced together with three cross bars wedged into holes bored through the logs. A chain hitch is attached in such a manner as to incline the drag to the desired angle—about 45 degrees, the forward corner being at the outer edge of the road and the rear corner at the centre. By dragging this implement up one side of the road and down the other, making a number of circuits and using two horses, the edges of the log plane off the top of ridges and rough places, drawing the material sideways and forward to fill hollows and ruts. This drag used a few times during the season on an earth road while the earth is in a moist condition after a rain, will keep an earth road in the best condition that an earth road can be made to reach.

Drags are often constructed of planks instead of logs. There is nothing in the construction of a plank drag that calls for special mention except the strengthening of the planks along their middle by a 2 by 6-inch strip and a strip of iron about four feet long and four inches wide; quarter-inch thick may be used for the blade. This should be attached to the front slab or plank so that it will be one-half inch below the lower edge of the plank at the ditch end, while the end of the iron toward the middle of the road should be flush with the edge of the plank. The bolts holding the blade in place should have flat heads, and the holes to receive them should be counter-sunk. Many construct them with the blade full length of the plank. A platform of inch-boards held together by three cleats should be placed on the bars between the slabs.

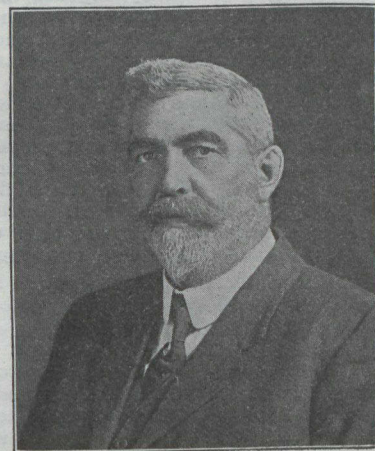
The successful operation of a drag involves two principles which, when thoroughly understood and intelligently applied, makes road maintenance with this implement very simple. The first concerns the length and position of the hitch, while the second deals with the position of the driver on the drag. Each influences the other to a large extent, and a successful use of the drag is dependent upon an understanding of both of them. The distance from the drag at which the team is hitched affects the depth of the cutting. If your roadway is very badly rutted and full of holes it may be well to use the drag when the ground is slushy. Clay, when mixed with water and thoroughly worked, becomes remarkably tough and impervious to water. If compacted in this condition it becomes remarkably hard.

Another valuable result of dragging is the reduction of dust. If the surface is smoothed after each rain and the road dries hard and even, no edges are exposed to crushing, and the only dust which forms is that due to actual wear of the road surface. Conditions are so varied in different localities that it is quite impossible to lay down a general rule for the number of treatments needed to keep a road in good condition. For instance, a tough clay will resist the action of traffic for a longer period than a loam. Certain sections of a roadway will require more attention than

others, because of steep grades or flat grades. The best guide for meeting these conditions is the knowledge and experience gained while dragging the roadway. There is one condition in which special treatment should be given—grades with persistent dragging becomes too high in the centre. To correct this it may be advisable to drag the earth away from the centre occasionally. Some of the advantages to be gained from the persistent use of the road drag are as follows: The maintenance of serviceable earth roads free from ruts and obtaining these conditions with expenditure of very little money, in comparison with money and labor required for other methods, and the reduction of mud in wet weather and of dust in dry weather. No municipality should be without a number of drags, so that they may be applied to their work on the roads whenever they are needed. It requires a little study of the nature of the ground and a little experience to determine the best time to use a drag after a rain storm. The shoulders along the side of the road should not be permitted to project above the general surface of the road, for they will prevent the water getting into the side drain, so that they should be cut down and made to conform to the road surface.

The berms, if any, between the grade and side ditches, should be kept smooth and free from weeds, brush or litter of any kind, so as not to interrupt the flow of water in the side ditches, water being the great enemy and destroyer of the earth road and good drainage the only remedy for it; that is to see that all water escapes from the foundation of the road through side ditches, culverts and outlets.

The split-log drag has come to stay; it will come more quickly if the men who actually work on the roads will investigate the claims of the split-log drags, and use them instead of graders for the maintenance of our roads. They will find that the drag and two horses will do more work, better work and so much cheaper work than the grader with four to eight horses and two to four men.



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VACANT LOTS.

So popular has the vacant lot gardening scheme in Regina become that it is now proposed to operate a co-operative canning industry in Regina, to take care of the surplus vegetables raised by the vacant lot gardeners and in private gardens. The scheme is the outcome of a conference between a manufacturer and the executive of the vacant lot garden committee, and will be outlined at the next general meeting of the association. It is said that there are two thousand more gardens under cultivation in Regina this year than in any previous year in the city's history, and as a result it is expected that vegetables will be plentiful in the fall. Under the proposal which is being advanced by the manager of a large plant in the city, the gardeners will be assured of a market for all the vegetables they may raise. The proposal, which is on the co-operative basis, is to adopt the latest and most scientific method of canning by which a thoroughly sanitary and high-class product may be guaranteed. This will prevent any glut on the market in green stuffs, and may be regarded as one of the most important announcements made by the vacant lot garden committee this year.