

Roots in Tile Drains

(Hoard's Dairyman)

If there is an elm or willow tree within 60 feet of a drain tile, in which water is running a considerable portion of the year, the roots of those trees will surely find their way to the tile and choke it up. We have had this experience several times and had to remove the trees. Another trouble is with alfalfa roots. Samples have been sent us of drain tile completely filled with alfalfa roots for several feet.

The Massachusetts Station has experimented with this matter for three years and has found that roots can be kept out by covering the tile with excelsior or sawdust soaked with creosote.

Rapid Progress of Traction Plowing

Prof. L. J. Smith, M.A.C., Winnipeg, Man.

It is safe to state that very few farmers in the older settled districts of the east have any conception of the part that the traction engine is taking in the development of Western Canada. This is not to be wondered at, for the development of the gas engine has been so rapid that many old settled sections of the country are only just beginning to appreciate the agricultural possibilities of the small stationary engine. It has not been 20 years since the stationary gas engine was considered of much use commercially.

Ten years ago, gas traction plowing was scarcely thought of. It is estimated that in 1908, not over 400 gas tractors were in the field; now there are about 4,000 in the Canadian West, together with about 4,800 steam tractors. Last year something like 1,800 gas tractors were brought in, and this year will see last year's record far surpassed. Inside of three years practically all of the old line steam traction firms operating in the North-West have put a gasoline or kerosene engine on the market, or have an engine nearly ready for this year's trade. Great factories for the manufacture of gas tractors have sprung into existence within the past few years, and bid fair to rival the old steam traction factories in size and producing capacity.

TREMENDOUS DEVELOPMENT

And yet with all this output of steam and gas tractors, the demands of the farmer can scarcely be met. Nowhere down through the history of the development of agricultural appliances can be found anything to compare with the speed of this tremendous development of time and labor-saving machinery.

The tractor first entered the field as a competitor of the horse, in the early seventies. In the race for supremacy the gas tractor cannot but have the advantage in the long run. The ideal type of horse was the result of years of breeding. In point of adaptability to many of the various farm requirements, the present tractor cannot be compared with the horse. Any improvement in the horse, however, must be painfully slow, but the mechanical genius of man knows no limit.

An improvement of 10 per cent in the horse would take years, but the mind of one inventor may at any time increase the economy of the tractor 10 or even 20 per cent. The transmission of the tractor uses 35 to 50 per cent of the power of the engine, a recent invention in transmission of power by magnetic gearing, if capable of being utilized on the tractor, will, without doubt, effect a saving of one-fourth of the fuel, when used for tractive work.

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