

years of the second decade of the history of this young industry.

"Quality" is the other important word in this motto for 1910. Economy affects a man in his relation to his business. Quality in the work affects him in relation to those he is dealing with or working for. The biggest handicap the industry has been up against in the past was the slovenly character of much of the early work done by the big outfits. Steam plowing came to be synonymous with poor plowing and weed infested farms. This, of course, was due in part to the clumsy equipment with which the pioneers in the industry had to work. It was also due, though, to a "more haste, less speed," slapdash-go-as-you-please policy and attitude upon the part of the early operators. They were concerned about quantity but untroubled about quality.

There has been a gradual change in this attitude of the operators of outfits and, while quantity is not lost sight of or neglected, a much greater measure of quality is looked for, striven after, and achieved. There will be still greater advances towards a high quality of work in the coming decade and it is necessary

er and harder. Moisture cannot percolate from the surface into the sub-soil during wet weather or rise from the sub-soil to the surface soil during dry weather. A great gulf is unwittingly fixed where none should exist. The plowed-in stubble lies on this hard, smooth surface unrotted, and adds to the width of the gulf. Many men realize all this but are powerless to plow any deeper than they have been doing. They have not sufficient power on the farm. An extra inch of soil brought from below the depth the plow is usually run at means a great addition to the draft of the plow, and they fear to tax their horses to that extent. Traction cultivation will change all this and it will be possible for a man to plow 6 inches deep and the sub-soil six inches below that at one operation—a very much to be desired method on many farms that have been under cultivation for a number of years.

Another advantage of traction over horse cultivation lies in the opportunity it affords of plowing and cultivating rapidly. There very often is a proper and improper time at which to plow. Land should not

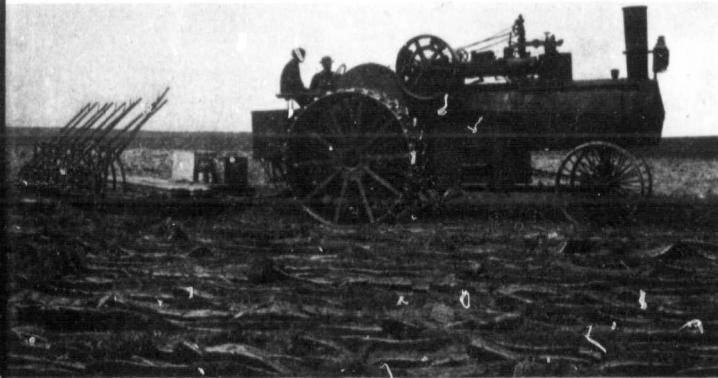
of 1910 who purposes doing custom work, should not be slow in urging this advantage of traction over horse cultivation upon his patrons.

The question of soil packing and its value in the conservation of moisture is attracting wide notice. There is a tremendous demand for all kinds of packers. Yet what packer exceeds the broad wheels of a traction engine? How much packing does stubble land need that has been disced, harrowed and drilled with an engine? This constitutes another advantage in favor of traction cultivation which should not be lost sight of.

In many of the minor details of his work, too, it is possible for the operator of a traction outfit to put more emphasis upon quality in his work than has been placed in the past. The industry is past the experimental stage and is bound to forge ahead. To be permanent and increasingly popular, quality first must be the keynote of the work. Plowing must be done straighter, for, if it is hard to do good work with a horse plow when the furrow is not straight, it is quite impossible with a traction

made in mercantile, commercial, and industrial pursuits, the twentieth century will be Agriculture's and in this field of human endeavor there will be the general activity and achievement? Mechanical power is bound to play an increasingly important part in this development. Traction cultivation, as a method of increasing production per acre, and per capita of those engaged in agriculture, must continue to grow in favor. The dawn of the second decade of the history of this industry is rosy with promise. With "Economy in operation and Quality in work," as their motto for 1910, those having in their keeping the future of this industry will be in a fair way to turning that promise into fulfilment.

The above article by Mr. Mantle is worthy of careful reading by every farmer in Western Canada. Mr. Mantle, who is now connected with the Agricultural Department



A Rumely 30 h.p. Steam Tractor Pulling a 10 Bottom 14 in. Cockshutt Engine Gang in Saskatchewan.



A Universal (English) Gas Tractor Plowing at a Depth of 12 inches in England.

essary and right that there should be.

The hold of traction cultivation upon the public favor and its growth therein will depend quite as much in the future upon the quality of the work done by mechanical power as upon its quality or cheapness. More and more men are asking for good work rather than cheap work. The bane of Western Agriculture to-day is the craze for area of land and acreage under crop, rather than yield of grain and quality of product.

Traction cultivation has several advantages over team work that the adherents of the former should not be slow to urge upon the attention of the prospective customer. Plowing can be done by an engine to any depth required instead of at the depth the horses can draw the plows at when working day in and day out. This is very important. Not enough deep plowing is done in the West. The depth of the original breaking is too often never exceeded and the same old land is flogged back and forth from year to year. As a result the sole of the furrow, or top of the sub-soil becomes tramped and packed hard-

be plowed when too wet nor, if avoidable, when very dry. When reasonably moist is the proper time at which to plow. Very often the pressure of work and the tedious character of horse plowing force a man to plow when his land is not really in proper condition. With a traction outfit that could be secured upon occasion, if one did not form part of the farm equipment, this plowing could often be done at the proper time, to better advantage, and more cheaply.

Traction cultivation affords little or no opportunity for the spreading of weed seeds on clean new land. This risk is always present with horses, especially if the oats being fed to them were not grown at home. In 1910 this aspect of the question will weigh more with many farmers than it did before. Strenuous efforts are being put forth by many men all over the country to beat out the wild oat and other noxious weeds. More men than ever before are trying to grow clean and pure seed grain. Any method, plan, or scheme that will assist them in keeping their farms clean will receive their earnest consideration. The tractioner

outfit. The adjustment and alignment of the plows should be as perfect as possible. Much of the evenness of the work depends upon this. The manufacturers have done their part and have provided magnificent implements. It is up to the plowmen to do increasingly good work with them.

There is also room for improvement in the character of many finishes and in the work done at the ends. These latter should not be left to the last. A headland should be plowed at either end of the field before a start is made and then a tidy appearance will be given to the field.

Attention to these details of workmanship will do much to make friends for traction cultivation, while their neglect tends to throw the industry into bad repute.

It is said by Sir Wilfrid Laurier that the nineteenth century was the United States' but that the twentieth will be Canada's. This remark has been hailed as a true and pithy saying from one end of the country to the other. May it not with equal truth be said that, whereas the nineteenth century was Industry's and immense strides were

of the Government of Saskatchewan, is a man who has had a large amount of experience in the cultivation of the soil. He is, moreover, a man who has looked at soil cultivation in its broadest sense, watching carefully and with the eye of the trained agriculturist, every development that would tend toward better farming.

The man who has been following the traction plowing letters in The Canadian Thresherman and Farmer for the last four years cannot help but be convinced of one thing and that is that traction cultivation is getting down to a real practical basis. Our letters in 1905, and even in 1906, were full of such expressions as, "I think I use so much coal," or, "I believe it costs me so much per acre," but in 1909 and 1910 there are many men who say "I know that I use so much coal" and, "I know that I can plow for so much per acre" and "I know that I have made a profit or a loss."—Ed.

