

operator and similar conditions that vary widely in every section of the country that about all manufacturers can feel safe in guaranteeing is that the machine will give its rated horse power at drawbar and at belt.

It is then distinctly up to the owner to get the work out of the tractor according to his soil and soil conditions. There is a distinct difference between the prairie loam in certain sections of Illinois and Iowa and the tough gumbo of the Red River Valley. A tractor might do a certain amount of work on the Portage plains in Manitoba that it could not possibly do in certain other sections of this province.

In conversation with one manufacturer recently, he told the writer that it was his intention to advertise his tractors according to plows in future. In other words, he would have, say, a three-plow tractor, a five-plow tractor, an eight-plow tractor and a ten-plow tractor and put his machines out under these names. The manufacturer who attempts such a proposition is very likely to come to grief and in the Province of Saskatchewan, where the new implement law requires that the manufacturer state the capacity of his machine, such a rating cannot possibly be lived up to.

As soon as we have arrived at the happy stage where the tractor is to be made to fit the farm, the numbers of internal combustion machines are bound to multiply very rapidly. Millions of dollars will be spent in this class of farm implement and it therefore behooves someone to work out a scheme of tractor rating that will permit the farmer to buy intelligently.

Why would it not be a good proposition to have dynamometer tests made of the various sections of the country. This could be done by our agricultural colleges with the tractors that are now at hand. It would be a very simple matter to chart each province and arrive at the approximate pounds pull per plow. Then let the manufacturer give his drawbar pull in pounds and the farmer knows then how many plows he can pull.

The light tractor seems to be having its day at the present time. On the United States side of the line there are approximately two hundred different machines, good, bad and indifferent. An observer of the situation will naturally ask himself why such a wave of enthusiasm for the light tractor. The light tractor will tell you that it is because it is the only thing. It is the real solution of the problem. A careful canvas of the farmers will tell you they have found they need a means of mechanical power on the farm to do certain kinds of work and for the present at least, the light tractor seems to fill the bill better than anything else.



The Hume Tractor, Hume, Ill., Drawing La Crosse Plows



The Waterloo Gasoline Engine Co., Waterloo, Ia., Hauling La Crosse Plows.



Avery 8-16. Avery Company, Peoria, Ill., used Avery Plows.



The Rotary Tiller, Allis-Chalmers Company, West Allis, Wis.

I have talked with men who wouldn't have a light tractor on their farm and who still cling to the old heavy type but these are men who have mechanical ability sufficient to make a success out of any machine.

The great trouble with the light tractor business to-day is the fact that we are trying to arrive at the solution of the problem in too many different ways. Henry Ford might build a car that would suit some people better than his present product, but Henry Ford has built an automobile that he can continue to build from year to year with as few changes as possible, and it gives the greatest satisfaction to the greatest number. By doing so he has been able to get away with a proposition that is second to none in the world's industrial history.

The light tractor business has got to be reduced to the Ford idea and the manufacturer who is going to make a real success of the light tractor business will have to put a type or the market and standardize it and stick to it year in, year out, with as few changes as possible.

The proposition of adding a little more horse power, a little extra weight and a little wider drive every time some farmer wants it, is not going to get anybody anywhere. In the first place, it costs money to scrap machines, re-design and rebuild, all of which cost must be added to the farmer. The manufacturer who has sufficient nerve, backed up by a knowledge of the real tractor needs of the farmer, and who will carry out his ideas, will be the manufacturer that will make a success of the game and at the same time will put the light tractor on the market to stay.

The question naturally arises, "Is the light tractor an all-purpose machine?" Will it do all the work that is required upon the farm. In order to answer this question intelligently, we must necessarily first define what a light tractor is. When we get down to the facts of the matter we will find that nearly everyone has a different definition. In a text book on traction farming, issued in 1913, we find these words: "The average weight of gasoline or oil traction engines should be from five to ten tons. Such a machine as this should develop from 15-40 drawbar horse power and be relied on at all times to perform the hard work usually performed by the horse. In the light of modern experience the above weights are excessive, and we find a great many good machines on the market to-day that weigh anywhere from three thousand to seven thousand pounds. One cannot define a light tractor in terms of weight and be absolutely correct, neither can horse power be taken as a basis of definition. For the sake of convenience we will therefore define a light tractor as one that will pull from one to three plows



All of these Tractors, as well as those shown at the bottom of the following page, are equipped with Waukesha Cylinder Motors