Kerosene Produces the Lowest Priced Farm Power

FROM every corner of Canada comes the call—"Give us low-priced power. Give us farm power that will reduce our farming cost to a minimum and at the same time increase the production."

This is nothing more nor less than the call of progress. Horse and feed prices have mounted the ladder so high that the cost of animal power staggers the man who figures on horses for his total farm power expense. While no one of judgment contends that the horse will ever be entirely replaced by mechanical power, it can be said even now that on progressive farms the horse is only used to supplement the tractor, that is, tractors and engines are doing the hardest and heaviest work as well as the belt work, and the horse will be found useful for light field work, choring, etc.

There is a great host of tractors on the market, so many in fact that to the casual observer it would seem difficult to make a selection. They can be classified in many ways. For instance, by the kind of motor—one-cylinder, two-cylinder, four-cylinder, vertical, or horizontal; by the number of drive wheels; by the kind of drive wheels and other similar ways. But all of these classifications are only incidental to the big issue, namely, the cost of power. That is largely determined by the kind of fuel used. There are then but two classes in which to separate tractors—a cheap fuel class—those that operate successfully on kerosene, distillate, and other low grade fuels; and into the other class—those that only operate successfully on gasoline and other high-priced fuels. As the farmer wants cheap power, this classification is the only one to follow, and it greatly simplifies the problem of selecting a tractor.

Kerosene Produces Cheaper Power than Gasoline

As we all know, there is a direct relation between heat and power, but while we are interested in the cost of power, it is hardly necessary here to go into a discussion of the chemical composition of these fuels. It is sufficient to say that kerosene contains more heat units per gallon than gasoline, and that as kerosene is the heavier fuel and as it requires more heat in distillation, it requires a more perfect tractor or engine to use it successfully. For anyone to say or claim that a gasoline engine will operate successfully on kerosene by making a few minor changes shows that he is either not posted on the subject or is wilfully making misleading statements.

It is to be regretted that it is necessary to refer to as old a report as the Winnipeg contest in order to find an official record of comparative tests of kerosene and gasoline, because there has been much learned about burning the heavier fuel since that time. The kerosene tractor was rather new when those tests were made. It had not received the attention that gasoline tractors had, consequently there has been much greater development in the field of using kerosene during the past four or five years than there has been in the gasoline field. In the absence of a more recent official test than the Winnipeg contest, we are forced to use it. The writer firmly believes that there has been an improvement in kerosene tractors equivalent to thirty or forty per cent, if not more, since the Winnipeg contest.

It should be remembered that the tractors used in the Winnipeg contest were rather crude machines as compared with the tractors of the present day. They were a great deal heavier per horse power, and consequently less efficient at the drawbar. A 10-20 horse-power tractor at that time weighed in the neighborhood of 14,000 pounds, while the present kerosene tractor of the same size will weigh only about 5,500 pounds. Steel and other high grade materials have been used in every way possible. More perfect design and improvement in construction have helped increase the efficiency of the present day tractor.

The average quantity of fuel consumed at the Winnipeg contest for the three years 1911-12-13 was .0976 gallons per horse-power hour for gasoline and for kerosene .1189 gallons per horse-power hour. In other words, a gallon of gasoline produces 10.24 H.P.H., and a gallon of kerosene 8.4 H.P.H. It would take 19½ gallons of gasoline to produce 200 H.P.H., and of kerosene 23¾ gallons.

As we are concerned about the cost of power, the next consideration should be the relative costs of these fuels at the present market price f.o.b. Winnipeg, which is 34 cents per gallon for gasoline and 16½ cents for kerosene. If the prices of these fuels vary in your locality, it will be easy for you to figure out the relative costs yourself.