

### The Economic Value of Good Roads.

The science of economics has many branches, some of which may be more prominent than that which pertains to common roads, but none are more worthy of careful consideration. There was a period belonging to the history of the Roman empire when the importance of roads was so fully recognized that the control of road construction belonged to the emperor. In later years we find an Emperor of France, the first Napoleon, whose power overshadowed the whole of Europe, devoting his attention to the construction of roads. These roads of France and Rome, it is true, were railways and military routes as well. And if the importance of the common road appears to have lessened in the minds of the people, it is only because attention has been diverted for a time to the construction of those magnificent lines of steel, which form a network over the continent from the Atlantic to the Pacific, and are an indelible record of the march of civilization and prosperity.

With respect to the actual monetary economy of roads it is difficult to arrive at exact conclusions. In different localities, where the extent of population, the average length of haul, the topography, products of the land and other circumstances vary, the financial returns from road improvement must also differ. Moreover, statistics of a reliable nature, on which to base conclusions, are difficult, if not impossible, to gather. We can only reach approximate results, which are, however, from their magnitude, very convincing.

The financial returns to the farmers have been represented in a number of ways, one of the chief of which is in cheaper haulage. This may be in the shape of larger loads, the result of easier traction. For example, from experiments conducted for the French Government we learn that to move a wagon and load weighing together one ton of 2,240 pounds at slow pace the traction force on a level Telford road surfaced with exceedingly hard stones was 46 pounds; on a level macadam roadway of smaller stones, 65 pounds; on a gravel road, 140 to 147 pounds; on a common earth road, 200 pounds. That is, nearly four times as much could be drawn on a perfect Telford road as on an earth road, provided the surfaces were level. If the load had to be lifted up an incline or lowered this ratio would vary.

The economy of good roads may from the above be expressed in a reduced number of horses, practical illustrations of which we have in England and Scotland, where it is rare to see a farm load drawn by more than one horse, so perfect are the roads. If the number of farm horses could be reduced by one-half or making every allowance for farm requirements, say, one-quarter, the saving would be enormous. Reports of the Bureau of Statistics show that in 1896 there were in

Ontario 434,384 working horses. This number does not include the unbroken horses nor breeding mares, but represents the number actually used for work. Estimating the cost of horse-keep at \$60 per year, which is a fair average, this would mean an annual saving of \$651,576 —no inconsiderable amount to a population of about 2,000,000.

Another basis of estimating the loss may be that of more rapid haulage and travel, which would bring us, if we estimate time at a money value, to an enormous amount. It has been stated by a Canadian member of Parliament, who has used the road to a considerable extent, that he had lost one-half his life by being compelled to travel over bad roads. The statement may be overdrawn, but it contains a fund of truth from which startling conclusions may be deduced.

The saving in hauling may be estimated with respect to the extended period in which it may be carried on. The last report of the Provincial Road Commissioner places this at \$19,547,280 yearly. At three per cent. this is the interest on a capital of \$651,576,000. The result of an estimate on this basis shows that Ontario could afford to invest \$8,000 on every mile of road in the province. A large proportion of the road mileage included in this estimate is but very little travelled, and it is safe to say that one-third of this amount, or about \$200,000,000, which is approximately the sum invested in the steam railways of the province, would convert Ontario into one of the best-paved countries in the world.

Further estimates may be made with regard to the possibilities of longer hauls, as in France, where, because of the excellence of the roads, teamsters can compete with the railways in drawing goods several hundred miles. There is an additional saving in the wear of wagons, harness and horseflesh, which, trifling in appearance, is in the aggregate no small amount.

A further division under which the financial returns to the farmer are to be considered is the increased value of farm property. This increase in the value of property arises, in the first instance, from the greater profits accruing as the result of the saving in the cost of transporting farm produce. There are two ways, at least, of rendering a business more profitable. One is by increasing the price obtainable for the article produced; the other is by decreasing the cost of production. Cheaper transportation by means of good roads, means, in effect, that the cost of production and the consequent increase of profit will guarantee a larger and readier investment in the farm.

The value of the farm is further enhanced by the increased opportunities that arise through good roads. The farmer is not impeded in any season of the year in the sale of his produce, and can in consequence reach the market when prices are highest. Perishable

produce, fruit, certain vegetables, milk, which, if it cannot be taken to the consumer in the town or city with the least possible delay is unsaleable or can be disposed of only at a reduced price. Good roads bring farm lands ten, twenty, forty miles away into available distance of a city market, whereas on the other hand one mile of really bad road may render otherwise fertile land useless. Distance with respect to the farmer and the market is not measured by the miles so much as by the time and labor it takes to transport his product.

Among other branches of agriculture which demand good roads, dairying may be referred to as a specific instance. Cheesemakers tell us that, in order to secure the best quality of cheese the milk should be transferred to the factory as quickly as possible, with the least possible amount of jolting, and that the cheese should be manufactured in large quantities. The effect of changing the road from bad to good in a dairying district is at once plain. The milk is carried over smooth roads expeditiously from the dairy to the factory with the least possible exposure to the sun and least amount of churning in transit. The milk can be drawn from a larger area, the cheese made in larger quantities, factories fewer but larger, and manufacturing expenses thereby reduced, while a more uniform quality of cheese is produced.

The value of farm land is further increased by the actual privileges which good roads bring. One of the great drawbacks of farm life is its isolation. Man is a social animal, and without the privilege of meeting his fellows he cannot attain his highest development. In spite of the healthful surroundings of farm life, its abundance of the best and purest of foods, statistics show that insane asylums contain a greater proportion of farmers' wives than of any other class of the community. The cause assigned is the monotony to which they have been subjected, the absence of all stimulant to thought and lively interest such as society creates. Why it should be the farmer's wife rather than the farmer, is, of course, to be attributed to the lesser strength of constitution which the woman possesses, the nature of her work, which is largely indoors, and further, the fact that the man has, in marketing his produce, more frequent journeys to the neighbor or town. Good roads bring the farmer nearer to the neighbor, to the town, the school, the church, the public meeting.

The value is increased by increasing the attractions of country life, and encouraging a greater liking for it. To-day the tide is from the country to the city. Were country life what it can be made by means of easy access and communication the tendency would be to draw the city folk to the country. In England a country house is as necessary to every man of means as is his town house. The beautiful country-side of England is its greatest charm; it is beloved by the people and