

## The history of roadside tree planting in Ontario

*In journeying lately through many of the northern and southern States ... no contrast was more striking, none more pregnant with reflection than the difference between the deforested and the partially wooded farms on the route. Numbers of the former, numbers of the latter, were passed.*

*..., the roadside fence, the long side fences as well, east, west, and south faces, would have their row of closely growing trees a dense extended wall of fragrant cedar, or lightsome larch, or, it may be, a continuous line of clustering maple branch and stem, their multitudinous leaflets bright in the sun of early June.*

*Screened from the wind in some quiet corner, the branches of the orchard rose. However poor the mansion, backed by such surroundings, it looked respectable, the fields rich, the farmer opulent. The comments of the travelling passengers invariably took this direction. "How much better a farm looks for the trees!" .... I'd give two thousand dollars more for this than one of those others, anyway. The man who owns a place like this is somebody. This is a residence, sir." <sup>1</sup>*

Driving through rural Ontario we often see rows of trees, mostly sugar maple, along roadsides. They are here and there and when you see a particularly spectacular one you are enthralled. That is what William Phipps described above, as he travelled through Ontario and North America.

The legislative history of roadside tree planting in Ontario goes back 150 years with the first Act passed in 1871. For some decades before, the clearing of the forest by the settlers was causing some concern in Old Ontario among progressive farmers and conservation minded men. These men worried about the loss of forests, of water in the soil, with the resultant drying of springs, soil erosion from the spring melt and from unobstructed winds, as well as the clearing of soils unsuitable for agriculture. Demands were made by a few lonely voices about the need to reforest and protect farm woodlots and to stop clearing of more forests, especially on the headlands and higher slopes. And in fact, many of these forward-thinking farmers had done this and then later had seen the error of their ways. Probably the first group to sound the need for trees for protection and aesthetics was the Ontario Fruit Growers Association. <sup>2</sup>

Members of the Association recognized that tree replacement along roadsides was one of the solutions. Four years after Confederation, Ontario passed its first law to encourage roadside tree-planting: *'An Act to encourage the planting of trees upon the highways in this Province, and to give a right of property in such trees to the owners of the soil adjacent to such highways.'* <sup>3</sup>

In the preamble to the Act, the Province recognized it was expedient to encourage the planting of trees, shrubs and saplings upon highways, as well as provide protection, from injury and damage to those

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<sup>1</sup> Ontario. Forestry Report 1884. R. W. Phipps. Sessional Paper #4 of the Ontario Legislature. 1885. p. 5  
<https://archive.org/details/n01ontariosession17ontauoft/page/n555/mode/2up>

<sup>2</sup> Coons, C. F. Reforestation of private lands in Ontario. Forestry Research Group, Armson Private Land Forestry Review. 1981. p5

<sup>3</sup> Statutes of Ontario. VIC 34. CAP 31 *An Act to encourage the planting of trees... adjacent to such highways.* 1871.  
<https://babel.hathitrust.org/cgi/pt?id=mdp.35112204260568&view=2up&seq=94&q1=trees>

already growing there. The Act allowed trees, shrubs and saplings presently growing along the highway to be the property of the owner of the land adjacent to the highway. Landowners could plant trees bordering the highway as long as they were not a nuisance and every tree was deemed property of the owner. Municipalities could remove trees for highway improvements, and reimburse the owner. Any tree cut or injured had to be approved by municipal council. There was a fine not exceeding \$25.00 plus costs upon conviction for removing or injury to a tree or tying an animal to a tree that caused injury to the tree. Half the fine went to the person laying the information and half to the municipality. The municipality could spend money to plant and preserve trees along a highway or grant money to persons or associations to do the same. A highway was defined as almost any public road, place or square.

Did the act succeed in its goal of having more trees planted? It is not clear if there was any promotional program similar to what will be described below. There is no record to any great degree the number of trees planted. Certainly, some progressive farmers understood the ecological and aesthetic advantage of having trees planted along the highway, around their homestead and farm lane. Figure 1 illustrates an example of this from 1878. The Beldon Illustrated Atlas's for Ontario counties have many such illustrations.<sup>4</sup>

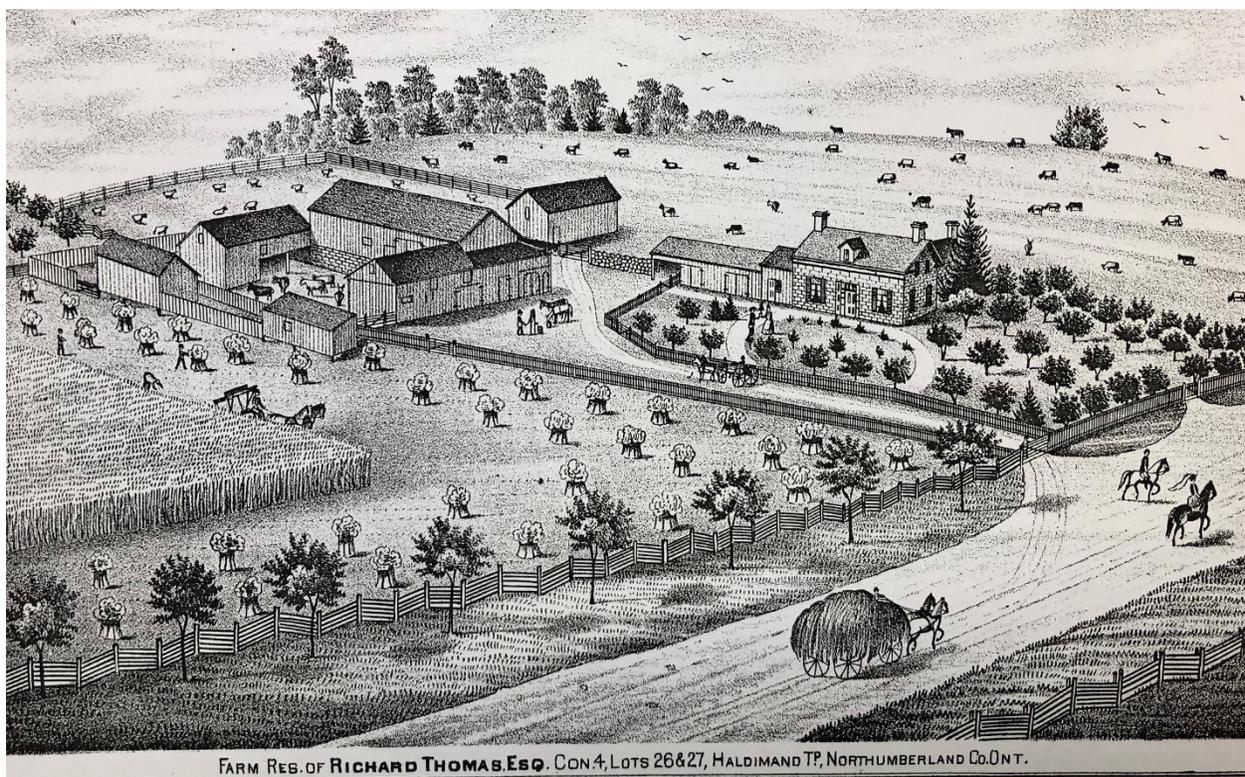


Figure 1. A fanciful drawing of Richard Thomas Farm showing roadside trees, homestead, orchard and fields

<sup>4</sup> H. Beldon & Co. 2001 Edition of Illustrated Historic Atlas of the Counties of Northumberland and Durham Ont. Toronto 1878.

Interest in forestry was growing through the 1870's. This whole growth of forestry in Ontario is well documented in 'Renewing Nature's Wealth'<sup>5</sup>. The American Forestry Congresses in Cincinnati and in Montreal, in 1882, was a large impetus to move the fledgling forest movement forward. Over 100 speakers in the two conferences presented and discussed forestry across the range of topics. Following these Congresses, Ontario delegates made a number of recommendations on a number of forestry topics relating to Ontario. One of those in particular concerned roadside trees:

*That encouragement be given to farmers to plant and maintain shade trees along public highways and the boundary lines of farms, by granting out of the Provincial treasury, a sum of ten or twelve cents for each tree so planted and maintained in a healthy and growing condition for a period of five years, provided the municipal council of the municipality in which they are growing shall have granted a like sum* <sup>6</sup>.

As a result, two important events happened in 1883. First, the Ontario legislature repealed the 1871 Act and passed a new Act entitled *An Act to encourage the Planting and Growing of Trees* or short title, *The Ontario Tree Planting Act, 1883*.<sup>7</sup>

How was the new Act different? The main difference, and the one expected to produce more interest in the 1883 Act, was that "any municipality may pass a by-law paying out of municipal funds a bonus or premium not exceeding twenty-five cents for each and every ash, basswood, beech, birch, butternut, cedar, cherry, chestnut, elm, hickory, maple, oak, pine, sassafras, spruce, walnut or whitewood tree" that was planted on any highway, boundary line or within six feet of such boundary. Municipalities paid this sum to the landowner and the Province reimbursed one half that amount to the municipality. It allowed any landowner, with the consent of an adjoining landowner to plant trees on the boundary of their farm, and that any tree planted on the property line was deemed common property of the two owners. General provisions for planting and ownership on highway trees remained the same. Prohibitions and penalties continued the same as the 1871 Act. The 'Ontario Tree Planting Fund' was established with \$50,000 apportioned <sup>8</sup>.

The Act allowed municipalities to pass by-laws:

1. To regulate the planting of trees on public highways
2. To prohibit the planting on the public highway of any species of trees which they may deem unsuited for that purpose
3. To provide for the removal of trees which may be planted on the public highway contrary to the provisions of any such by-law

The municipal by-laws provided: for the appointment of an inspector of trees; for tree protection against injury or removal by anyone, except by resolution of council; for conditions on which bonuses may be

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<sup>5</sup> Lambert, R. S., *Renewing Nature's Wealth*. Ontario Department of Lands and Forests. 1967.

<sup>6</sup> Beadle, D. W. et al. Report of Committee appointed to attend the American Forestry Congress at Cincinnati, Ohio. Appendix to Sessional Paper No. 3. p 139. Authors were D. W. Beadle, Secretary and Treasurer of the Ontario Fruit Growers Association, Wm. Saunders, future first Director of the Dominion Experimental Farm, Prof. Wm. Brown Founder of Ontario Agricultural College, P. C. Dempsey and Thos. Beall

<sup>7</sup> Statutes of Ontario. VIC 46. Chap. 26. *An Act to encourage the planting and growing of trees*. 1883.

<https://babel.hathitrust.org/cgi/pt?id=mdp.35112204263950&view=2up&seq=384&q1=trees>

<sup>8</sup> *Ibid*.

paid; and generally, for regulations as authorized by the Municipal Act. The inspector was to report annually to Council, the number of trees planted by species, the names of those who were entitled to the bonus and the amount. The inspector had to certify “that the distance between any one tree and the tree nearest thereto is not less than thirty feet, that the trees have been planted for a period of three years and that they are alive, healthy, and of good form and upon adoption of such report the bonuses or premiums shall be paid”.

A key amendment to the Act was made the following year, 1884. The provision that allowed the landowner to own trees on the highway was repealed. The following substitute was made – “Every tree now growing on any Highway in this Province shall upon, from and after passing of this Act, be deemed to be the property of the municipality within which each highway is situate”.<sup>9</sup>

The second event that year was to appoint a Clerk of Forestry for the purpose of informing the public on forestry matters. This was Robert W. Phipps (quoted above) and until 1892 he was attached to the Department of Agriculture. Phipps was described as a short, stocky man full of energy and rapid movements.<sup>10</sup> He had no formal forestry training but a strong interest in farming and forestry. But he was a prolific writer. He travelled widely through Ontario, the United States and Europe to gather opinion and forestry articles to include in his reports. His annual forestry reports to the legislature were lengthy and covered the entire array of forestry topics and, of most interest here, promoting the planting of roadside trees. His first report on the Necessity of Preserving and Replanting Forests in 1883 had 8,000 copies given away in 1885<sup>11</sup>.

In his Forestry Report for 1884 Phipps recounted numerous farmers expounding on the need for trees following the earlier destruction.<sup>12</sup> Farmers themselves who cut down the forest and left little or nothing, now see that the landscape must have trees. Farmers talked about planting windbreaks and yard trees 20 and 30 years ago. Below are just two of dozens of accounts.

*Mr. Clark has planted many trees in this vicinity (Scarborough). He points out one row of maples by the roadside, only three years planted, a full mile in length: they are now twelve to fourteen feet in height and seem to be in every way successful. “Trees I plant”, said Mr. Clark, “rarely fail to grow. My method is - in June to go to the bush, select such young trees as appear most fit for my purpose, and, with a sharp spade, cut a circle round the tree, about eight inches from the stem. I tie a string round the tree to know that its (sic) roots are cut, and mark a red chalk cross on the south side, to plant it as it stood. I then leave it till fall, when I take the waggon and go for my trees. By this time the summer's growth has started fresh roots inside the circle, and the young tree, properly lifted with a spade, will come up a mass of earth and roots which will cling together, and grow without fail. Some say, cut a rather larger circle when you take them up, to*

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<sup>9</sup> Statutes of Ontario. VIC 47. Chap. 36. *An Act to Amend “The Ontario Tree Planting Act. 1883”*. 1884.

<https://babel.hathitrust.org/cgi/pt?id=mdp.35112204261061&view=2up&seq=129&q1=trees>

<sup>10</sup> Lambert, R. S., *Renewing Nature’s Wealth*. Ontario Department of Lands and Forests. 1967.

<sup>11</sup> *Ibid*.

<sup>12</sup> Ontario. Forestry Report 1884. Sessional Paper #4 of the Ontario Legislature. 1885. P. 35-36

<https://archive.org/details/n01ontariosession17ontauoft/page/n555/mode/2up>

*save the little roots that sprout at the ends. This is needless, for the original roots will die back an inch or two, and all new roots will grow inside that. Then, taking all the earth I can, and planting at once after digging, filling up with soft loam, not hard chunks, and mulching well afterwards, the trees will grow if mice and cattle can be kept away”.*

*Not far off is a splendid row of young maples, planted by Mr. Macklin, Jr. These are set out but five years, and have made twice the growth of many for the time. They are twenty feet in height, nearly fifteen in spread, many six inches in stem and present a splendid appearance, extending the full length of the lot along both concession and sidelines, as well as forming a long double avenue from the road to the house. His success was attributed to mulching an area six feet in diameter with pea straw and stones - the stone to keep the cattle away.*

*Along the road in front of Mr. Gould’s house (near Oshawa) is nearly a mile of roadside maples twenty feet apart doing excellently well. Between one and two hundred of these were planted seventeen, the rest thirteen years ago. Of these one hundreds, not one has missed to grow and flourish.*

Phipps wrote of numerous accounts of farmers’ techniques of selecting trees, preparation for transplanting, then transplanting, spacing, mulching and fertilizing. But there were failures too, from wind, drought, mice, trampling by cattle. Many farmers noted that survival was much better with mulch and manure.

R. W. Phipps continued promoting and reporting until 1892. He died in 1894 at age 59 and the province lost its greatest promoter of replanting trees and forests. In his job, Phipps was tireless and dedicated to advancing the cause of tree planting in Ontario.

Thomas Southworth was appointed as Clerk of Bureau of Forestry in 1895. One of his first duties was to review and provide a detailed analysis of the effectiveness of the 1883 Act. The Act had been in full operation from 1886 to 1894. (Three years were required to pass before any payment of bonuses.) Southworth had sent letters to 433 townships and 228 other municipalities to gather information with regard to tree planting. A large proportion did not reply and many could not provide accurate information. Only 49 municipalities including 42 townships had taken advantage of the program. During that time \$4,808.78 was paid out, less than 10 percent of the original \$50,000 allocated for the Ontario Tree Planting Fund.<sup>13</sup>

As well, 17 townships, 21 cities, towns and villages had adopted a by-law but no claims for bonuses had been forwarded. Southworth reported, however, a “good deal” of planting had been done in these municipalities. Based on these reports, he estimated about 75,000 trees had been planted as a result of the Act. He compared this to the state of Kansas where about a million and a half trees were planted annually. Southworth asked municipalities to describe their satisfaction of the system and if they would continue to make use of the Act. Thirty-eight of townships responded. Eleven had repealed their by-law. Some stated

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<sup>13</sup> Ontario. Report of the Clerk of Forestry 1896. Sessional Paper No. 40. 1896.  
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the Act was unpopular, ten were indifferent and not likely to continue and nine were satisfied and anticipated further claims under it.

Southworth identified a number of reasons why the Act was not generally adopted and why it failed to work to the satisfaction of the municipalities. Reasons were many and various and with many similarities to today's attitudes. They included:

- The delay of three years which must elapse between planting and the receipt of the government bonus;
- Objections on the part of those who do not propose to take advantage of the Act, to the outlay of public money in what they regard as a private benefit;
- The discouragements sustained by many who have planted trees on the highway from the destruction by cattle and the want of adequate protection;
- The desire of many landowners to retain full control of the trees planted by them, with power to cut them down as they see fit, which they would lose by accepting the bonus;
- The preference among many who set out trees, for location, modes of planting, etc., not in accordance with the Act;
- Lack of information in many cases as to the details or even the existence of the Act
- The extent of roadside planting carried on irrespective of legislation, which in many localities renders the Act superfluous, and
- Objectives to roadside trees, more especially in localities where the roads are narrow and the soil heavy, on the grounds that their shade keeps the road wet and injures the crops.

Southworth concluded the objections as indicative of public opinion. He stated the 1883 Act had 'fallen far short of realizing the expectations entertained at its adoption'. He further recommended that the Province repeal the section that paid one-half the bonus.

In 1896, another Act was passed named *An Act revising and consolidating the Acts to Encourage the Planting and Growing of Trees*, or in short, *The Ontario Tree Planting Act, 1896*. Southworth's recommendations were included (he may have drafted the text), based on his analysis of why the 1883 Act was not widely accepted<sup>14</sup>.

The 1896 Act allowed the landowner to be the owner of planted trees. Recall that the previous acts also allowed landowners ownership of trees but the 1883 Act was amended a year later to have municipalities own the trees. In other changes, the province removed the clause paying municipalities one half of the bonus; municipalities had the right of refund for bonuses paid under the former Act; municipalities no longer had to report to the Province; and they were not required to pay bonuses where trees were planted less than 15 feet apart. Otherwise, many provisions were repeated word-for-word from the earlier Act. Penalties for injuring planted trees continued as before. The Act allowed Municipalities to pass by-laws similar to the 1883 Act including allowing them to pay out bonuses not more than 25 cents.

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<sup>14</sup> Statutes of Ontario. VIC 59. Chap. 60. *The Ontario Tree Planting Act. 1896*.1896.  
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The program carried on to 1901 with retroactive payments, although in decreasing numbers with none in 1897. There were 43,858 trees planted in 51 townships in 23 counties under the Program. As indicated in Table 1, \$5,482.22 was reimbursed to the municipalities for one half of the value of trees planted <sup>15</sup>.

Pilkington in Wellington County (now one half of the Town of Centre Wellington) was the single largest municipal subscriber with 3,620 trees reimbursed. Pilkington passed a by-law in December 1884 and appointed the township clerk, Robert Cromar, as “inspector of tree planting” at the rate of two dollars per day while employed.<sup>16</sup> The most subscribers by county were in Lincoln County (see note in Table 1) with 6,653 trees followed by Oxford, Ontario (now Durham Region) and Brant. Every county in southwestern and central Ontario had at least one municipality involved in the program. In eastern Ontario, only Oxford Township in Grenville and Kingston participated, and only to a small degree.

Table 1. Top 17 municipalities with more than 1,000 subsidized trees.

<b>Municipality</b>	<b>County</b>	<b>Payment by province (\$)</b>	<b># of trees</b>
Pilkington	Wellington	452.48	3620
Pickering	Ontario	444.73	3558
Chinguacousy	Peel	379.90	3039
Thorold, Town	Welland	332.87	2663
Zorra, East	Oxford	243.60	1949
Niagara	Lincoln	223.62	1789
Hope	Northumberland	210.75	1686
Dereham	Oxford	196.11	1569
Gainsboro	Lincoln	174.49	1396
Brantford	Brant	173.59	1389
Burford	Brant	169.61	1357
Louth	Lincoln	162.24	1298
Oakland	Brant	146.00	1168
Grantham	Lincoln	144.73	1158
King	York	140.37	1123
Warwick	Lambton	133.98	1072
Whitby	Ontario	128.99	1032
34 others	13 others	1624.00	12994
<b>Total</b>		<b>5482.00</b>	<b>43858</b>

Number of trees is calculated based on Payment by Province divided by 12.5 cents

Ontario County (now Durham Region)

Lincoln County (now Grimsby, Lincoln, West Lincoln, St. Catharines and Niagara-on-the-Lake)

Welland County is south part of Niagara Region

<sup>15</sup> Public Accounts were referenced from the years 1885 to 1901 inclusively to complete Table 1.

<sup>16</sup> Pilkington Twp. By-laws 1867-1897, 1971. County of Wellington Archives. Microfilm A1982.73.

Southworth also surveyed those municipalities where tree planting had occurred independent of the Provincial inducements, whether “trees been planted along highways, ... and with what success”, and “what species flourished best...”<sup>17</sup>. He found that planting of forest trees along highways and on farm boundaries “has been undertaken to a fair or considerable extent in 152 townships, and to a small extent in 73 others. Fifty-four other municipalities reported no planting of that kind had been done. Some of this is due to newly settled areas or areas with heavy natural growth of trees along roadsides. He found planting failures amounted to a small percentage and usually due to drought in the season of planting. Most municipalities were satisfied with the result of tree planting. There were some concerns that crops would not grow under the shade of mature trees. In the large majority of cases, maple was the most popular species, and soft maple was slightly more popular than hard maple. Elm was also used. Spruce, then cedar were the popular evergreens.

The countryside was changing. Southworth, in his 1898 report, stated “The appeals made to farmers... has not been unheeded. Though but few plantations of any size have been laid out, yet, in innumerable instances windbreaks and lines of forest trees along roads and fences are seen.... The traveller... can hardly fail to note the pleasing effects of extensive farm and roadside planting in restoring something of the charm of a well wooded country”.<sup>18</sup>

In 1904, the first nursery was established at the Ontario Agriculture College in Guelph under the supervision of E. J. Zavitz, newly hired by the Department of Agriculture. Its expressed object was to provide planting stock to farmers interested in improving their woodlands.<sup>19</sup> In the same document Judson Clark, the newly appointed Provincial Forester, noted the “unprecedented” demand for suitable trees for planting. He stated that due to this demand “exorbitant prices” were asked for planting stock by the few nurseries able to supply seedlings - for white pine \$15 to \$45 per thousand for three year-once-transplanted stock - that he calculated could be produced on a large scale for \$3 per thousand. Nurseries at the time produced stock that sold in the dozens or hundreds rather than in the thousands. He wrote a long essay on “The propagation of trees by farmers”. He described the process from collecting, care and planting of tree seed, and the transplanting and after care of small quantities for farm purposes. Clark provided special guidelines for shade trees similar to what had been described earlier.<sup>20</sup>

However, it was always noted that trees from the Forestry Department were to be used for forest plantations on waste lands or poor agriculture land and not for roadside or ornamental plantings. As well, Norway Spruce for hedges or windbreaks was not supplied by the Department.<sup>21</sup>

In 1913, *An Act to encourage the Planting and Growing of Trees* and its short title *The Tree Planting Act* was passed. It was more of a housekeeping Act with basically the same language as the 1896 Act but

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<sup>17</sup> Ontario. Report of the Clerk of Forestry 1896. Sessional Paper No. 40. 1896.

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<sup>18</sup> Ontario. Report of the Clerk of Forestry 1898. Sessional Paper No. 34. 1898. p. 2.

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<sup>19</sup> Ontario. Annual Report of Bureau of Forestry. 1904. Sessional Paper 4 1904. p. 7.

<https://archive.org/details/n01ontariosession37ontauoft/page/n705/mode/2up>

<sup>20</sup> Ibid. p. 55-56.

<sup>21</sup> Ontario. Report of the Minister of Lands, Forests and Mines for 1913. Circular #8. 1914. p 96.

more modernized to reflect other new legislation <sup>22</sup>. However, in 1927 the Act was rewritten under the same title with two clauses to include only boundary trees and the penalty for damaging them <sup>23</sup>.

Sadly, many roadside trees have been lost to reasons other than age. Modernization of roads have taken their toll. Roads have been widened from one chain (about 20 metres), ditching built and hydro infrastructure has deformed the shape of trees.

While *The Ontario Tree Planting Act of 1883* may not have had the initial desired success, it and with the promotion of Phipps started a successful progression and demand for trees on the destroyed once treeless landscape in southern Ontario. The majority of the trees that were planted through the Ontario Tree Planting Act, and subsequent programs were probably locally sourced native trees and therefore well adapted to the condition at the time and may be the reason for high survival rates.

Government and municipal incentives for planting trees continuing on to the present. While there is no similar focused program that is funded by the government for roadside planting in Ontario today some municipalities have rejuvenated roadside planting programs. The Ministry of Transport plants roadside trees.

As described by Phipps in the opening paragraph roadside trees contribute to the beauty of the landscape and have become part of our cultural heritage.

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<sup>22</sup> Revised Statutes of Ontario. Chap. 213. *An Act to encourage the Planting and Growing of Trees*. 1914  
<https://archive.org/details/v2revisedstatute1914ontauoft/page/2842/mode/2up>

<https://babel.hathitrust.org/cgi/pt?id=coo.31924016981304&view=2up&seq=1008&size=125>

<sup>23</sup> Revised Statutes of Ontario. *An Act to encourage the Planting and Growing of Trees*. 1927

<https://archive.org/details/v3revisedstat1927ontauoft/page/3284/mode/2up>