

FORESTRY.

At the winter meeting of the Fruit Growers' Association of Ontario, Mr. John Knowlson, of Lindsay, as follows:—

On the lines of horticulture and agriculture in this Canada of ours, I am impressed with the idea that there are three subjects worthy the special attention of philanthropists and all well-wishers of our country's progress, financially and socially: Forestry, Sorghum, and Grape Culture. Numerous have been the plantings in our agricultural and horticultural journals for forest tree planting; yet how little has hitherto been accomplished. However, let us still hope that farmers and others will be aroused to its necessity. No people have more reason than we Canadians to value and admire the "goodliness of trees;" and yet in no country are they more rudely assailed as the enemies of civilization, and objects of extermination, by the ruthless and consuming fire. Such semi-barbarism is discreditable to our national life, our common sense, and our foresight; the matters of less moment.

Even to confine our view to the environs of our country towns, with very few exceptions, one of the most forbidding and desolate features about them is the mark of this yearly devastation of forest trees, for which there is no necessity. Whereas, if properly ornamented with trees—some standing alone, some in groups—would be exceedingly attractive; and a park with convenient drives and by walks for pedestrians, would be likely to draw summer residents, whose money would contribute to the permanent enrichment of its community.

An essential part of the proper treatment of all wood lots is *thinning*. Farmers who cut all the wood from a lot, regardless of size or quality whether for use or for sale, are managing as ill as can be imagined. They might thin in such a way as to get a large yearly profit, and get more for the remaining wood than for all they now cut off at once.

Although, as I have remarked, so little has been done in the way of planting forest trees, let us hope that, through the continued labors of the Ontario Fruit Growers' Association, and the influence of the public press, that the day is not far distant when forest culture will become popular.

The boundless area of suitable lands in this country, the admirable adaptation of its soil and climate to the growth of magnificent trees, I trust, will lead to the diffusion of capital and labour in this department, and that it may soon become a favorite pursuit. In no other way can farmers so cheaply embellish their farms and add to their attractiveness and value, as by improving their woods groves and forests, and planting all the choice varieties of native trees or any spare ground not needed for cultivation. So numerous are the varieties of our deciduous trees that we can have but little difficulty in making a selection. There is the elm, the red and white oak, the maple, the black walnut, the ash, the hickory, the black and white birch, the linden (basswood), the butternut, chestnut, larch, etc. And to give greater beauty to these plantations, should be interspersed here and there irregular groups of different varieties, including an occasional evergreen, of which we have many indigenous species; the white and red pine, the spruce, white and red cedar, and what is justly termed the king of evergreens the graceful hemlock.

In the planting of groups it is well first to study the outlines of all the best natural groups to be found, taking careful notice of the way in which the varieties are combined how near the trees are to each other; how often nature has planted them close together; how often within a few feet of each other; how often at the distance of twenty or thirty feet. Although a group thus imitated would not show much beauty in its incipency, yet it will become more beautiful and picturesque, more and more like nature every succeeding year, and will give delight to everyone who can appreciate nature herself.

However liberally we may introduce foreign trees let us retain a large number of our own. The many uses to which trees contribute prove their great value; for buildings, for fences, for various agricultural implements, for carriages, for ship and boat building, for furniture, for

staves, for casks, for fuel, and a thousand other uses for which they are invaluable. Besides, without trees, the world would become a desert; with them it might be made a paradise. They temper the heat and cold, prevent the injurious dryness of the atmosphere, and greatly promote the fall of genial showers and seasonable rains in spring, summer and autumn. In almost every county of Ontario it is easy to find lands covered with wood of a second growth, which, within the memory of the present generation, have been cultivated for farm crops, till they were worn out—that is, so drained of those constituents which plants derive from the earth that no other crop could be got from them that would pay the cost of cultivation. These lands, upon being abandoned by man, soon began to grow up in wood; and in ten or twelve years the fields were covered; and in forty a fair yield of wood got from them. The wood again being cut and the land ploughed and cultivated, good crops can again be had from them for some years. Air and water were the principal fertilizers that sustained their growth, but their leaves shed from year to year had fertilized the soil very much. It occurs to me that very few of those who are desirous to plant out forest trees need be put to the necessity of raising them from seed, for in every section of Canada tracts are to be found where young trees of all sizes, suitable for transplanting are to be had for the labor of digging; and it should be borne in mind that in digging up trees some skill is required. Some have long tap roots that penetrate the ground deeply, while others spread widely near the surface. These different characters required different modes of proceeding; the roots should be taken out of the ground without the slightest bruise or mutilation, if possible, thus the necessity of curtailing the tops would be obviated. The less the roots are exposed to the air between the time they are taken out of the ground and the time they are planted the better. This should never be forgotten. If roots are of any value it can only be when they are sound and fresh. In less than fifty years hence the requiem of the stately pine, the oak, and the elm will have been sung; but their stateliness and their value will be recorded as a thing of the past; do we not already regret the wholesale recklessness which has been employed for their destruction by the grasping hands of avarice.

This scarcity in the older settlements is now felt as a severe loss; but the next generation will in all probability have to deplore their absence as a loss of still greater magnitude.

Plantations of a tree called the *Catalpa speciosa* are now being made on an extensive scale in many parts of the United States. It appears to be a native of the Mississippi valley. It appears to be hardy, and is represented as being a rapid grower and remarkably durable. I procured ten of those three years ago, and planted on a dry, gravelly soil, which I am led to believe was not the sort best adapted to their growth, although they are said to succeed in all descriptions of soil. The stems were about three-fourth of an inch in diameter and six or seven feet in length. From the fine growth they made and the healthy appearance they showed after two years planted, I was induced last spring to plant 100 more, which I did upon less than an acre, on soil similar to the first. Every one grow and looked healthy the past fall. I intend planting another hundred or more on the same plot next spring, together with a few of our native forest trees interspersed.

At the winter meeting of the same association, held in the Council Chamber, City Hall, Toronto, on the 31st January, and 1st of February, 1883, the meeting took up three items on the programme, and discussed them together, viz:—"The best method of awakening a general interest in Practical Forestry," "The best varieties of Forest Trees to plant for ornament and for profit," and "How can we induce farmers to Plant Trees along the Roadside?"

Mr. GOTT.—This is a subject that is growing in interest from year to year. I will confine myself to the question, what varieties of forest trees are best for general planting; and the first variety I might mention is maple. I believe that the trees of that variety command

the respect of not only Canadians, but of all people among whom they are known. Our Sugar Maple is one of the most beautiful trees that can be produced in any country. It is a tree that has so many uses and so much ornament about it that wherever we see it we have infused into our minds a genuine love for our country. The soft maple is also a very beautiful tree. It grows very symmetrical, is very ornamental where it is cultivated for ornamental purposes, and in every way fills the expectations of the planter. The American Elm is, I think, one of the most graceful trees that we can have planted on our streets, simply on account of its pendulous habit of branching. The basswood is also a very beautiful tree for ornamental planting; and I often think that if we would take our basswood tree and our tulip tree, and bestow upon them the same attention that we sometimes do on exotics, they would repay us better for it. The basswood tree is said to be one of the best honey-producing trees in the country. The tulip tree is also a very handsome tree. It is a tree that will reward any amount of care and attention. It grows very symmetrical; the leaf is very large and showy, and in every way the tree is ornamental and beautiful, but more especially so when it shows its beautiful blossoms. The man who sees it once and learns that it is a native tree will certainly be inspired with a deeper love for the country. The nut trees are very valuable, the chestnut, the white walnut and the black walnut. Amongst our overgreens the Canada balsam is one of the finest and most beautiful. It would be almost impossible to import a tree that would surpass it in beauty. Our pines are also very interesting. We have several of them in our country. If they are taken early and planted in our lanes, they soon assume fine proportions, and become very ornamental trees. The black spruce, taken and cared for, I think fully equal, if not superior to the Norway spruce, of Europe. I saw a specimen of this tree on the ground of Mr. Arnold last winter, which struck me at once in a manner which I shall never forget. These are the principal forest trees that I think are interesting to us.

Mr. REASON.—I have a large number of bass woods in my grounds, and I prize them higher than any deciduous trees I have growing, although I have several varieties. The chestnut and the two kinds of walnut the gentleman recommends, will not grow at all in the locality in which I reside (in the centre of Victoria county), although that is one of the best agricultural districts in the Province. I believe a few black walnuts, in sheltered positions, have been brought to maturity; but no chestnuts will grow. I entirely dissent from what Mr. Gott says with regard to the Canada balsam. I think it is the most worthless of all the evergreens, the most unsatisfactory, the shortest lived. That has been my experience of it, and I live in a county in which it flourishes naturally. When we come to plant it as an ornamental tree it takes sick and dies just as it has got to such a height that it is beginning to be interesting.

Mr. GOTT.—There must be something wrong in the environment.

Mr. REASON.—I am sorry Mr. Gott did not make mention of two trees I admire very much, the white pine and especially the Norway pine. I think the Norway pine is one of the most beautiful that can be planted.

Mr. LESLIE.—That Norway pine is what is known as the red pine.

Mr. SLIGHT.—The remark that the previous speaker has made about the Canada balsam fully expressed my experience. I have no doubt that in some parts of Canada it succeeds very well, but in the northern country it does not. I have noticed that just as soon as the trees around it have been thinned out by persons desiring to preserve it, and just when it has attained a fine symmetrical growth and a good size, it begins to decay. From what I have gathered as to the easiness of transplanting and the success which attends it in growing, I have come to the conclusion, that the best native evergreen we have is the white spruce. It is a perfectly healthy tree. I have never yet known a white spruce to show any signs of decay from age, where it has had anything like fair play. Its wood is one of our most valuable timbers for

certain classes of work; in boat building especially it is invaluable. From what I know of it I would recommend it as the best tree to plant by roadsides. A timber which I see the architects are seeking after very much is the butternut; and in the northern part of the country the tree succeeds very well.

THE PRESIDENT.—Mr. Gott mentioned the butternut under the name of the white walnut.

Mr. ARNOLD.—I have to endorse the sentiment of this gentleman with regard to our Canadian Balsam. It is a beautiful tree in its native swamp, and if we could transplant it into a native swamp again, or to some place where it would have a spring about it to keep it moist, it would stand; but if we attempt to transplant it to high ground, just as soon as it gets to be about ten or fifteen feet high, just when it begins to become beautiful, it begins to die. I hope we shall not get the black spruce and white spruce mixed. I find that there is a great deal of confusion in regard to those two spruces. I have them both, but really I do not know which is the black and which is the white. The spruce that Mr. Gott alluded to as growing upon my place I believe to be the black spruce, but I am not positive. The black spruce, if that is what I have, spreads out more at the bottom than the white, and I would consider that it has a blue shade to it. It is one of the prettiest trees we have, either native or foreign. I have challenged the whole county, and I might almost go further and challenge the whole province, to produce as fine a tree as my black spruce, that I got out of a swamp. The Magnolia is perfectly hardy, and the old Austrian pine is one of the finest trees in the country. I feel like planting walnuts all over my place, and I think if I had a hundred acres farm I would plant them in every fence corner—not for their beauty, but because they would pay. The basswood succeeds well in our section. The walnut does well throughout the greater part of the country.

Mr. ROR.—I can confirm what Mr. Arnold says about the white spruce, and the Austrian, and the Norway spruce. I have both Norway and black spruce upon my place, and when they have room to grow and begin to grow from the ground, I find that the black spruce is the more ornamental of the two. One fault that the Norway spruce has, is, that it goes away up too high and then gets bare at the top; but the black spruce always remains a beautiful tree, and, as Mr. Arnold says, has a blue tinge. The Austrian pine is one of the most beautiful of trees until it gets old. As to the balsam, I find what Mr. Arnold speaks of; after you have had it removed three or four years you will find a branch here and there through the tree dead; but when it is young it is a very beautiful tree. I think every farmer ought to plant the black walnut and the white walnut. The black walnut is not only a very beautiful tree, but it is going to be a very valuable tree. I do not know but what you will get from \$30.00 to \$100.00 a thousand feet for black walnut now. Our country is being denuded of it. The ash is also a valuable tree; it is now brought greatly into use in making railway cars and various other things.

Mr. ARNOLD.—Americans have come over from Michigan and paid as high as \$0.00 to \$3.00 a stump for old walnut stumps along the Grand River; and they have taken them over to Michigan and made them into furniture, which they have brought back to us and sent to Europe.

Mr. ROR.—I planted about fifteen or eighteen walnut trees some nine or ten years ago—the nuts; and before I came away I went out to get the size of them, and they measured eight or 10 inches in diameter.

A MEMBER.—What is the difference in the growth of black spruce and the Norway spruce, the same time planted?

Mr. ROR.—I suppose they will remain at about the same altitude until they get to be about twelve or fifteen years old, and then the Norway spruce will begin to grow past the other.

Mr. A. M. SMITH.—There is one tree of considerable importance in our section that has not been mentioned yet, that is, the common poplar. Our pulp mills in the vicinity of St