ravines. The wetter the land, the smaller the timber. In the muskegs, with now and then an exception, there is only black spruce, which are three to five inches in diameter. On the table-land, near the ravines, there are white spruce up to 30 inches in diameter, yet 18 inches are frequent. Balsams are remarkably sound, and are found up to 18 inches in diameter. Poplar grows to a great size and length, but is mostly too old, and therefore faulty.

The first impression of the newcomer in the spring or rainy weather is unfavorable. Even the table-land appears to be an endless and dreary swamp, ill-fitted for agriculture, and many people that are easily discouraged are turned back thereby. Those who have stayed have invariably settled near the ravines. It seems strange now that those who had the whole country to choose from took up inferior locations. It was soon discovered that the land everywhere had sufficient fall, and became dry enough when the bush and fallen trees which blocked the run of the water were removed.

MAKING A BEGINNING.

As stated before, the soil is light-brown, yellow or white, but the color seems to make no difference as to its agricultural value. If, in the process of clearing the land, the vegetable mould has not been burned off unduly, the plow at first plowing goes down to the clay only in spots. When the clay is reached, it takes a good team to keep the plow moving, but if once plowed it keeps open and friable. I have often with great interest watched what a field would be like in the spring that had been plowed in the fall. Invariably I found it in the most favorable condition imaginable for seeding. Any kind of light harrow, with two strokes, would make a perfect seed-bed. No lumps appeared, and there was no need for a clod-crusher. This would not seem remarkable, as the action of the frost will pulverize almost any kind of clay, but the clay here will crumble down without the aid of frost.

CROPS.

I do not wish to make the impression that all of our soil is clay. We have some fine sand loam, on which I have witnessed grow 100 bushels of oats per acre, weighing 44 pounds per bushel. We have three tons of clover and timothy per acre. Peas thrive well, producing as high as 30 bushels per acre. We are not afflicted with the pea weevil. Onions, carrots, parsnips, lettuce and sugar beets do well. Turnips and cabbage are fine. I have seen cabbages growing in the Rainy River Valley weighing 32 pounds. I have seen the red table beet as large as a good-sized dinner pot. Leguminous plants do best; they are the most independent of nitrogen in the soil, not by any means that the soil is deficient in nitrogen, but the land needs cultivation before the nitrogen becomes available for plant food. This is confirmed by the largely increased crops after the first years of cultivation. We grow fine potatoes. William Wilson has been growing potatoes near Port Arthur for fourteen years, and he says his average has been from 350 to 400 bushels per acre per year, except one year, when the yield fell to 250 bushels. He received a good price for them in the local market at digging time—50 cents per bushel. We have no potato bug. We grow fine celery. One time, at the Toronto Industrial, when we had the New Ontario exhibit there, I had celery shipped down twice per week. It was sent to me in barrels, the stalks, top and all, being about four feet in length. Strawberries and raspberries grow wild. R. A. BURRISS.

Thunder Bay District, Ont.

Protection of Small Birds.

The Agricultural Society of the Gironde, France, is convinced that the continually increasing number of enemies of crops, and especially of the insects so harmful to vines, Cochylis and Eudemis, is due to a great extent to the disappearance of small birds. The society, therefore, has invited all the agricultural associations of France to unite and insist upon the protection of these valuable auxiliaries of the farmer. An address to the Minister of Agriculture has been submitted to these associations, in which the society requests the strict observance of the International Convention of March 19th, 1902, with regard to the protection of small birds, and the prohibition of their wholesale destruction by means of nets and snares.

Shorten the Trip to Town.

The value of farming land depends very largely on the distance from a market. A good road has the effect of shortening the time required for carrying a load of produce to market, which is practically the same thing as shortening the distance. Howard H. Gross, in the Two Harbors (Minn.) News, relates the story of a hard-headed German farmer at Sheboygan, who, in a very graphic and comprehensive way, told of the value of good roads as it appeared to him. He said: "My farm is ten miles from market. If it was only five miles from market, it would be worth $15 an acre more. I cannot move my farm in, but if we can build a good road to my farm, I can come in the ten miles with my produce easier than I could come in five miles to town."

Creosoting Timber.

1. How many gallons of creosote would it take to treat one thousand feet of one-inch elm by boiling in a tank?

2. If thoroughly treated, would the lumber ever need painting to preserve it? It is to be used as siding on a barn. Would it last as long as pine?

3. Would it have any less tendency to warp or to check?

4. What does Mr. MacMillan mean by "color ground in oil"? (See issue Jan. 5th, 1911.)

E. Burriss' New Residence.

Near Port Arthur, Ont. (The old and the new.)

5. If the lumber (rough) were painted two or three times with creosote, would it ever need to be so painted again?

6. About how much would it take to paint one thousand feet of rough lumber with two applications of paint, at the prevailing prices today?

7. Are tub silos boiled in creosote?

8. Would elm treated with creosote make a satisfactory silo?

9. If there is a bulletin printed upon this subject, where and how can I get it? E. C. W.

Ans.—1. One thousand feet of one-inch elm, soaked one hour in creosote at a temperature of 180 degrees F., and then immersed for six hours in cold creosote, would absorb almost ten gallons of creosote. This would make a very good treatment where the timber was to be used for ordinary purposes. Should the timber be used in the ground or for silo construction, it should be given a more thorough treatment. If soaked four hours in hot creosote, at 200 degrees F., and then immersed fourteen hours in cold creosote, it would absorb twenty gallons of creosote.

The tank treatment of lumber, although it furnishes the best possible protection against decay, has the great advantage of requiring such a large tank as cannot easily be provided on the ordinary farm, and of requiring that a greater supply of creosote be used than is actually necessary for the impregnation of timber, as it is necessary to keep the timber covered during the whole time that the treatment is being conducted, and, therefore, after the treatment is completed, there is a quantity of creosote left on hand.

2. Lumber that has been thoroughly treated with creosote would never require painting to preserve it. Creosoted elm lumber would last longer as barn siding than would untreated pine lumber.

3. The warping and checking of lumber is due to the uneven evaporation of moisture which has originally been in the lumber, or which has been absorbed by it. All lumber which is creosoted should first be thoroughly seasoned. After seasoned lumber has been creosoted, it does not absorb moisture, and, therefore, does not check or warp.

In order that the elm lumber should hold its form while it is being seasoned, before being creosoted it should be piled in an open form, with slats between the layers in the pile, and should be seasoned under cover. Between all the boards in the pile there should be room for free air circulation, and the ends of the boards should be painted with some thick paint, so that the moisture will not evaporate more rapidly from the ends of the boards than from the sides, and thus cause checks.

4. "Color Ground in Oil" is the trade name of ground colors handled by all hardware dealers.

5. Painting with creosote is the most practical manner of giving a preservative treatment to lumber for barn siding. It is cheaper than tank treatment, and for this purpose is almost, if not quite, as efficient. The creosote should be heated to a temperature of about 200 degrees, and kept hot as long as it is being used. The lumber should be perfectly dry, and the painting is preferably done on a warm day, so that the creosote will have plenty of time to soak into the timber before it cools and becomes thick. A second coat should be applied as soon as the first is dry. The treatment would not need to be repeated before a good many years. It might reasonably be expected to last as long as any building.

6. Allowing for waste and evaporation, the painting of one thousand feet of rough lumber with creosote would require about ten gallons of creosote if the timber is painted on all sides, as it should be to give it the proper protection against decay, and if two coats were applied. Ten gallons of creosote should not cost more than $1.50.

7. The timber used in the construction of tub silos should be given a tank treatment with creosote, if perfect results are sought. The most efficient treatment would be an immersion in creosote at 200 degrees Fahrenheit for about four hours, and, following that, an immediate immersion of about fourteen hours in creosote at the temperature of the air. This treatment would produce a wooden silo good for a lifetime.

As the creosote treatment of wood is practically new in Canada, and as the creosoting of silo timbers would require an apparatus such as is not common on farms, such treatment has not, to my knowledge, taken place.

8. Elm painted with creosote would make a very satisfactory silo, and would resist decay for at least twenty-five years. Two or three thorough paintings on all sides with hot creosote after the timber is cut to shape and before it is put into its place, would enable it to resist decay for about twenty-five years, and probably longer. The only difficulty with using elm for this purpose would be that it would be so difficult to thoroughly season it without having it lose its shape.

9. The Forestry Branch has been so overwhelmed with exploration and administrative work that it has not been possible to prepare any bulletins on the subject of timber preservation. For five cents, anyone can secure from the Forest

Faith in the Future Exemplified by This New Ontario Home.