

Nebraska, where 25 years ago, cordwood sold for seven, eight, and even ten dollars per cord, and it can now be had for \$3 to \$4, when the population is many times greater. Governor Morton explains that this reduction is caused by protecting the natural groves from fire, and the planting of artificial groves. An authority says: "I estimate the cost of preparing an acre, and getting the cuttings of soft maple and ash, at \$3 per acre, and a man can plant 2½ acres in a day. That is all the cost for 10 years, except interest and taxes on land. I have 1,226 trees per acre. Seven years from planting I cut one-fourth, or 340 trees, equal to 15 cords of wood; the eighth year 15 cords more; the ninth the same; the tenth year you see my profits. I should cut what is left, 456 trees. Allow four trees to the cord, so as not to over-estimate it. I have several trees only 10 years old which are 14 inches in diameter and 50 feet high. Four, I think, would make a cord. Allowing six trees to the cord, we have 76 cords, and with 45 cords cut before, 121 cords. At \$3 per cord, allowing \$1 for cutting, I have \$242." Saxony, from her 400,000 acres of forest land, receives an annual net income of about \$1,250,000; Batavia, from her 3,000,000 acres, an annual net profit of \$4,500,000. He reckons that a farming country should not have less than 25 percent of its area in wood land. He calculates that it would require 16,971,420 acres to keep the United States in railroad ties.

Mr. Wm. Little, Montreal, read an interesting paper on the destruction of forests, in which he quotes: "Fatal inroads have already been made in the great pine forests of the North Atlantic region. Its wealth has been lavished with an unsparing hand; it has been wantonly and stupidly cut, as if its resources were endless. What has not been sacrificed to the axe has been allowed to perish by fire. The pine of New England and New York has already disappeared. Pennsylvania is nearly stripped of her pine, which only a few years ago appeared inexhaustible. The great northwestern pine States—Michigan, Wisconsin and Minnesota—can show only a few scattered remnants of the noble forests to which they owe their greatest prosperity, and which not even self-interest has saved from needless destruction."

Mr. Little quotes Mr. Joly, a Canadian authority, as saying: "For some years past the idea has been gaining ground amongst men who take an interest in the future of the country, that our great pine and spruce forests are getting rapidly exhausted, and that before long a trade which enables us to export annually over \$20,000,000 worth of timber, will sink down to woefully reduced proportions. Thinking men have begun to sound the note of alarm. Let us now try and make an inventory of the timber resources of the Dominion, beginning in the west. On the Pacific shores, in British Columbia, the bountiful gifts of Providence are still stored up for us. How long these treasures will last us and what advantages we shall derive from them, depend in a great measure upon ourselves. From the Rocky Mountains to the Province of Ontario there are scattered here and there certain tracks of well-timbered land, but they are the exception. That timber will be required for the local wants of the

people who are now only beginning to settle on our fertile prairies."

Our governments are bungling our timber business in a most shameful manner. In some instances vast tracks have been presented to speculators for political considerations, who realize millions out of limits which they have never seen. If our government would spend a little of their surplus in replanting the timber lands which they have sent to destruction, instead of appointing agents to scour the country to gather statistics, some benefit might accrue to agriculture. But when the revenue from the sale of timber limits begins to diminish, the politicians howl in order to catch the farmer's political ear. Our farmers are not so pig-headed, however; they can see at a glance that if the money is not in the treasury, the timber limits remain untouched, which is a far better state of affairs than a surplus in the treasury.

Scraping the Bark off Trees.

A reason often given why the rough bark of trees should be scraped off and why a thick coat of lime-wash should be applied, is that this treatment will kill insects, says J. J. Thomas, in Mich. Horticulturist. Before resorting to either of these processes with the hope that they will prove an effectual remedy for insect troubles, it may be well to inquire what insects make their home in the rough bark of trees and perpetuate their species there. The curculio does not, but inhabits the soil beneath the trees for at least a part of the season; the orchard caterpillar deposits its rings of eggs on the young twigs; bark-lice choose smooth rather than rough bark; the peach grub goes to the root and not to the rough bark, and the apple-borer more frequently damages the small smooth trees. A few of the codling worms crawl under the rough bark, but destroying only these would make but a small impression on the whole numbers. Good judges think that scraping the bark renders it more susceptible to the cold of winter; and coating the bark with a shell of lime is of little use. It is much better to promote growth by good cultivation or by a top-dressing of manure, and to kill insects on the branches by direct attack wherever they may be found. If lime is applied to bark, it should be in the form of a thin wash which will scarcely change the color. Trees thus treated usually grow better than others, because those who take this care usually give good attention generally.

Prof. S. A. Forbes also made some valuable comparative tests of insecticides on fruit trees, and finds that, under favorable circumstances, Paris green will save to ripening, at an expense of ten cents per tree, seven-tenths of the apples that would be likely to be injured by the codling moth; that London purple will save about one-fifth of them, while lime will save none. The observations made confirmed statements made by others that the codling moth is double-brooded, and that it does not attack an apple until it is about the size of a pea. He also comes to the conclusion that it is entirely useless to attempt to combat the curculio by means of any insecticides applied to the fruit.

In Germany a small nursery is attached to nearly every common school, and the children are taught to grow trees from seed and cuttings, to graft and to bud, so that they acquire some practical knowledge of and intelligent interest in the growth of trees and shrubs.

Sheaves from Our Cleaner.

Hogs in the orchard until apple-gathering time, is going to become a popular thing. They will destroy thousands, yea, millions of embryo insects, by picking up the blasted fruit as fast as it drops. Hens, too, can do good work in an orchard, if they have the run of it.

An English paper says that American horse-breeders are taking the cream of English horse-flesh out of that country. The same journal also asserts that the English horse on importation into this country, develops new vigor and increased size, and that in this country he is destined to reach the highest state of perfection; also, that England must soon look to America, not only for work horses, but for breeding-stock.

Of the many combinations of food, Mr. Thos. Russell, Exeter, Ont., finds the following profitable, the ration being for 15 head of cattle: About four bushels of chaff or chaffed straw (clean wheat or oat), no hay, are put into a box; one wooden pail of bran is added, with two pails of meal, one part ground peas, and three parts bruised oats. Four bushels of pulped turnips are added, and a small handful of salt. The whole is dampened with one and a half pails of water, and two hours after one-half of the mixture is fed, the second half being fed four hours later than the first. Two of these mixtures are used during the day, the first at 9 a. m. and the second at 5 p. m., and is fed in four feeds, viz., at 5.30 a. m., 11 a. m., 4 p. m., and 8 p. m., the last half of the second mixture always being fed the following morning. A small quantity of uncut hay is put into the racks with each feed, save in the case of the grades, when oat straw is used instead of hay. They are let out to water twice a day, 9 a. m. and 3.30 p. m., and are left out for an hour and a half in the forenoon, when the weather is fine. This ration is fed from November until some time in May. A less quantity is fed during the summer, and only morning and evening, with a further difference that green feed is cut instead of straw, and the cows suckling calves get an addition of bran. In the first part of the turning out season they are housed at night, but not when the weather gets really warm.

A writer in the "Philadelphia Press" says: My neighbor had two orchards, separated by an east and west road. They both bore the same year. One season the canker worm got possession of the south orchard and completely stripped the trees of leaves, but did not cross the road. This was the bearing year. The south orchard bore no fruit that year. After a short time the trees leafed out again and the orchard appeared as well as ever. The next year the south orchard bore a fine crop and the north orchard failed. As this south orchard now bore in the off-year, when apples were dear, the crop from this alone was worth more than both orchards usually brought. This was many years ago and this habit has remained permanent. Many years ago in central New York we had a cold snow storm when the apple trees were in full bloom. The fruit was killed and we had no crop that year. The next year we had a fine crop of fruit, and thus the bearing year was permanently changed. That the bearing year can be changed by picking off the fruit is beyond any reasonable question. In most cases it will be advisable not to change the bearing year, but to secure a medium crop each season. How the labor compares with the advantage is a question for each one to consider, but the object is within our reach.