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ADVOCATE. FARMER'S THE

Fifty Years Ago.

BY T. B. WHITE, CLARKSBURG, ONT. fortunately many men are slow to recognize that the world moves. They look at things through the spectacles of their grandfathers, and travel through life along the old ruts in which they were born. Their grandfathers cut down every tree in sight and planted wheat, because trees were plentiful and wheat scarce. They continue chopping down trees and sowing wheat, although in the interval an agricultural revolution has taken place. Timber is now scarce and wheat plentiful, but it makes no difference to them; they go on just the same as if the conditions of fifty years ago were those of to day, notwith-standing that with the opening up of the prairie regions of this continent and other continents by steam communication, cereals are continually becoming cheaper. They continue the unequal struggle against the virgin fertility of the Western prairies and the coolie labor of the East, growing wheat or other cereals on poor, worn out lard, better adapted for forestry, and neglecting altogether the opportunity offered of growing timber to provide for the needs of the future," etc., etc.

future," etc., etc. Now, sir, there are two ways of looking at this question of forestry and farming, and whether we look at them through old spectacles or smoked glass there seems little or no excuse for any person at the present time seeing things in such a muddle as the above quotations represent. Even the farmer himself, though he may not be able to theorize on scientific suppositions to the extent that some of our learned friends do, he can, to some degree, discern facts and figures and deduce therefrom more correct conclusions than are often found in our forest literature. One great defect in our Forestry Reports is in looking backwards too much and misrepresenting the material sought for a foundation to build upon, making the whole fabric unreliable and calculated to do more harm than good, so much so that it would be more appropriate to change their title from "Forestry Reports" to "Forestry Lamentations," for outsiders who may read them can only think what a bad fix the farmers are bringing the country to, in changing the climate and im-poverishing the land. But to show how needless those lamentations are, we will give a few facts and figures concerning the past and the future, for

How the world moves, and oats and wheat and barley grows, There's none better than the farmer knows.

In 1851 we had our first crop of fall wheat, and had to reap it by hand with a hook, to thresh it by hand with a flail, take it to market fourteen miles with oxen, and only get fifty cents per bushel for it. In 1891, our last crop against the scorching sun and drying winds by a that we have marketed, we cut with a binder, threshed by steam, and took it to market five miles with horses, and got ninety-five cents per bushel for it. About the same time I was living with a man in Vaughan, and he had two steers (beef) for sale, but there was no market for them. This same person, I have noticed in the ADVOCATE, had a sale of some thirty head of cattle a few months ago which realized an average of about \$130. In the spring of 1849, at Vendue, in the gore of Toronto, I bought two four-year-old steers, good steers and well win-tered, for \$40. This last spring, 1892, we sold three-year-old steers (beef) for about \$60 each, and one two-year-old for \$5.25 more than we paid for the two-year-olds forty-three years I mention those things more partibefore. cularly that the rising generation may see that maybe it is not such a misfortune after all, as they have been led to think it was, that they were not born before their grandfathers were. Then with respect to this question of having now to compete with the products of those vast prairies of the West and the coolie labor in the East, there are two sides to it, and to flourish off the one to make a point without touching on the other, is not business. England's consumption of wheat is nearly double what it was fifty years ago, and their home supply about one-half less.

In 1846 their consumption was about 152,200,000 bushels and their home supply about 142,200,000 bushels, therefore only requiring about 10,000,-000 bushels from abroad. In 1892 their consumption is about 230,000,000 bushels and their home supply only about 70,000,000 bushels, requiring about 160,000,000 bushels from abroad So that comparing the increase of demand with the increase of supply resolves the question of growing wheat to sell in favor of reasonably expecting as good prices in the future as in the past. And though Manitoba and the North-west may have 20,000,000 bushels where there was none fifty years ago, it takes seven and a half times that amount to make up the increased demand. And, then, can 20,000,000 bushels be got out in reasonable time ? It would make up 2,000 trains of twenty cars each. each car taking 500 bushels. And for ten of those trains to leave Winnipeg daily it would be 200 days before the last trains left, and allowing ten days for the round trip it would require 100 engines and 2,000 cars seven months to land that amount at the seaboard.

In the spring of 1870 we bought seed, and going to a farmer in Euphrasia who was known to have the best of wheat, we found that he had loaded up all he had to spare to take to Collingwood next morning, but said he would let us have what we wanted at seventy-five cents per bushel, though he was not sure he would get that in Collingwood. We got barley at forty cents and oats at twenty cents. This is as low as they are now, and farmers needed better prices then as well as they do now.

Forestry.

(Continued from page 397.) PRACTICE.

Soil and Site .- The best soil for a seed-bed is well drained loamy sand. This is suitable for all kinds of trees, and should be specially prepared if not found naturally; it may be so varied that for small and light seed there is added more sand, for heavy and large seed more loam. Manure is unnecessary, but whatever manure, compost or sod-ashes, is used to enrich the soil, must be thoroughly rotted and mixed in. The soil must be worked into thoroughly mellow condition, to a depth of 10 to 15 inches, free from stones, lumps, weeds, like the most carefully prepared garden bed.

For a small quantity of seedilngs make boxes 4 to 6 inches deep, of a size convenient to handle when filled with soil; bore three or four half-inch holes in bottom for drainage, and fill with loamy sand.

The choice of a proper site for seed-bed often makes all the difference in the amount of aftercare necessary and in the success. A well sheltered level spot within reach of water, with

seed and of kinds which produce much immature seed, like elm and larch, must be sown more thickly.) The number of lineal feet of drill per unickly.) The number of timest feet of drift per ounce of seed, varying of course according to quality of seed, may be roughly stated as tollows: Ash, maple, honey locust, cherry, and similar seeds, 20 to 25 feet drill per ounce; and similar seeds, 20 to 25 feet drill per ounce; catalpa, elm, alder, birch, etc., 40 to 45 feet; pines (very variable in size) and spruces, from 30 to 60 feet, mostly the latter; firs, with a small per cent. of germinating seed, may be sown as thick as 1 ounce to 10 feet of drill, and larch, 1 ounce to 25 or 30 feet. Black locust, with a high per cent. of germination and vigorous dehigh per cent. of germination and vigorous development the first year, not less than 40 feet; one pound of chestnuts, acorns, hickory nuts, will require 10 to 12 feet drill; 1 pound of walnuts may require 5 feet.

Method of Sowing.-Sowing in drills is preferable to broadcast sowing, because it can be done more evenly and the plants can be more easily cared for by weeding, loosening the soil, mulching, thinning out, as well as more readily moved for transplanting.

A distance between the drills of 4 inches i⁸ sufficient for conifer seedlings remaining one or two years in the seed-bed ; deciduous tree seeds, which develop rapidly during the first year, require a distance between the drills of 9 to 12 inches.

As to width of drill, one seeded so as to pro-duce a single row of plants is preferable to a boarder drill with many plants; although more plants are grown on the same space in tha latter case, they are as a rule not as strong and vigorously developed.

Make drills across the bed by pressing the soil down with the edge of a lath or board of proper width ; or for deeper drills, with a stick or hoe or other suitable tool.

In sowing, a piece of cardboard bent at right angle or a trough made of two light strips of wood nailed lengthwise at right angle will do

service in evenly distributing the seed. The depth of the drill, or, what is the same, the depth to which the seed is to be covered, depends on the size of the seed.

The object of covering the seed, besides excluding the light and as a protection against the birds, etc., is to prevent the drying out of the seed and later of the plant germ as it pushes up. The covering must be thin enough to allow the air to penetrate to the seed, and the germ to push through to the light. Better too little than too much covering. Too much cover is the death of many seeds, and at least results in retarding germination, smaller number and weaker plants.

The following are the maximum depths to which the seeds mentioned may be covered with loese soil, and which may serve as a guide for other seeds :

Oak, chestnuts, 11 to 21 inches; maple $\frac{1}{2}$ to $\frac{3}{4}$

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wind-break or wall, is most suitable.

The dangers to the seed if left in the seed-bed through the winter make sowing in the spring the rule, except with those seeds which cannot be kept or are apt to spoil by keeping, and which should, if possible, be sown soon after ripening. Elm, soft maple, birch are therefore sown in June; alder, hard maple, linden, fir, etc., are best sown in fall ; while conifers, which ripen late, are mostly kept till spring. Fall sowings sprout earlier in spring, and the seed lings are therefore more liable to danger from late spring frosts. Even temperature being most favorable for sprouting, the choice of time in spring varies according to the locality and the season when the weather becomes settled. Middle of April to May is probably a mean or average time.

Quantity of Seed. - The quantity of seed to be used on a green area, or the room needed for a given quantity of seed, depends on the size of the seed as well as on its quality. Consider ation should also be given to the rapidity of development of the seedlings and the length of time they are to remain in the seed-bedf Deciduous trees require more room the first year than conifers. The number of seeds per pound allows a fair estimate of the comparative room required, making allowance for quality. (Poor

rule) will stand and produce best results with a cover of 2 inches; alder $\frac{1}{5}$ to $\frac{1}{3}$ of an inch; spruce, Scotch pine and larch, $\frac{1}{3}$ to $\frac{1}{2}$ of an inch ; Austrian pine of an inch; birch and elm as thin as possible (a cover of ½ an inch prevents germination entirely.)

The drills may be covered to advantage with other material than the soil of the seed-bed, such as a garden mould mixed with sand, sod ashes, sawdust, which keep loose and moist and afford additional plant food. The covering material is filled into drills, heaped full and then pressed down gently (firmed), to bring seed and soil into close contact, which helps to supply the moisture.

Fall sowings may be covered more heavily. A cover of sphagnum moss, powdered for small seeds, makes an excellent cover, being light and retaining moisture. But care must be taken to make this cover not too thick or to replace it with soil when the seed has germinated, in order to avoid the spindling growth to which the plantlet would be forced through the thick cover.

If the soil is in proper condition, fresh or moist, no watering is required, but if the water seems necessary it is better to apply it before sowing.

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TO BE CONTINUED