

west and the ground is seldom in proper condition at seed-blowing time for germination to take place.

When rain does come at the right time the surface of the ground is so soon dried by the wind that the seed very seldom gets a chance to start.

It sometimes does though, as witness the little bluff on the side of the old Waldron trail about ten miles west of Macleod, now ten or twelve feet high, where twenty years ago there was not the sign of a bush. It is interesting to note this bluff is protected from Prairie fires by a precipitous cut-bank rising from the river 200 feet on the one side, and a broad road on the other.

It is interesting too to see how the so-called hills of the Prairie, the Coteau, The Bad Hills, Bear Hills, etc., are all helping along the movement, for among nearly all of these are to be found little patches of trees which are forming the centres from which further tree-spread will take place. These hills are really old moraines, the resting places of the glaciers ages ago, and when you get up on the top of them a few miles from the edge "up on the bench" you find you are just level Prairie again similar to what you left behind you, only you are now 100 to 200 feet higher and on another Prairie Steppe. The rough ground around the margin of this upper plateau—the hills so-called—is usually full of hills and valleys, with here and there springs and sloughs and an odd creek running a few months in the summer, and it is here, in these moist spots the poplar seed has often been found suitable ground for germination. Snow drifts collect along the edges of these coulees and every year in the spring and fall, the Prairie fire time, for generations these have presented a protective wall of snow between the trees and the fires. The melting of this snow has no doubt in many cases been an important factor in both the germination and the growing of the trees afterwards. Striking instances of this are to be seen on the main line of the C.P.R., on the south side, just west of Beverley, and about ten miles west of Swift Current. There is another fine example a few miles east of Sidewood.

Hills Fail to Protect.

Our Tree Planting Car passed several times this summer through these old moraines, and in every case the spread of the trees was very striking. Only in one case was it absent and that was on the Assiniboia line going towards S.W. Saskatchewan. There we saw no native trees though there were lakes and springs sometimes too. But the hills were all rounded, with no steep places to catch the protecting snow-drifts and Prairie fires had all the chance they wanted to burn over them. There were thus, as far as we could see

THE TEN COMMANDMENTS OF THE PRAIRIE SHELTER BELT

By Archibald Mitchell

- 1.—*Thou shalt not neglect thy duty toward thy Home, thy Wife and thy Children, thy Live Stock, thy Garden, thy Farm and thy Country; Thou shalt plant a Shelter Belt of trees.*
- 2.—*Thou shalt not forget to plan it large enough to enclose and shelter from six to ten acres.*
- 3.—*Thou shalt remember that success in tree growing depends upon moisture.*
- 4.—*Thou shalt also remember that there is enough moisture every year in the ground to grow trees but that the greater portion of it is lost through the action of the sun and wind.*
- 5.—*Thou shalt therefore plant the trees 4 x 4 ft. apart so that the branches may meet as soon as possible and shade the ground and so protect the moisture, and the main belts from four to six rods wide so that the drying winds may not enter but be compelled to pass over the tops of the trees.*
- 6.—*In preparing land for planting thou shalt summer fallow it well the year before it is planted, or break, backset, plow deep and cultivate two years before.*
- 7.—*Thou shalt use small plants, cuttings or trees only 12 to 24 inches high.*
- 8.—*Thou shalt plant alternate rows of Manitoba Maple and Russian Poplar, with Ash or Elm as every fourth tree of the Maple rows so that thy plantation may grow tall and bushy and require no further labour after the second year.*
(A row of Caragana on the outside is an advantage.)
- 9.—*Thou shalt carefully cultivate thy trees one year or two years to preserve the moisture, after which thou shalt cover the ground with a permanent mulch of straw or manure at least one foot deep.*
- 10.—*Thou shalt do all in thy power to encourage thy neighbour by example and precept to fulfill his duty in this same respect so that thou, thy neighbours, and the stranger who may visit thee may know it is a goodly land and a pleasant one to dwell in, and so shalt thou and thy children be happy, prosperous, and contented.*