

crown had got beyond the destructive snow level.

The crisis appeared to have been passed, but nature, through its powerful agent, the north-east wind, still disputed the "young emigrants" their right to live in their adopted land. The wounds made by the wind-blown branches on the bole of the trees had not sufficient time to heal in our comparatively short growing season, and as a result each year saw nature's unsuccessful attempt to close up the wound, resulting in a series of concentric rings, each growing successively larger than its predecessor. From a scientific point of view this was interesting, but it did not betoken any good to the young saplings, which were making such a brave stand. Some preventative must be found, and my grandfather anxiously cast about to find a remedy. He saw that there was only one thing to be done, and that was to protect them from the ravages of the wind and to carefully prune the branches which had been broken. In hardly less time than it takes to say it, he had planted a willow hedge as a wind break and had carefully gone over all his trees with his pruning knife. Although this was not a sovereign remedy, it assisted the plantation materially.

What the Results Have Been.

On a late spring day, the same season when the first Black Walnuts were planted, 37 years ago, it has been my

pleasure to enter a grove of tall, clean limbed trees, fragrant with the breath of new green leaves. This is plantation No. 2, the one I mentioned as having been planted in an alluvial soil, and the one I have considered as the most successful, not so much from the size of the trees, for the plantation on the cultivated soil boasts of larger ones, but from the fact that it illustrates more clearly and definitely the salient points these experiments have to teach us.

If one looks at the profits of this plantation, photograph No. 1, one is struck with its resemblance to the side of a sloping roof, the apex consisting of the largest trees being under the lee of a hill, and the eaves, the smaller trees, growing in the open. Now, although these trees were planted in the same year, there is such a marked difference in growth that it will be interesting and instructive perhaps to compare their height and diameters.

It will be found that the average diameter of the trees in the lee of the hill is 7 inches, while those in the open have only a diameter of 4 inches. Taking the age of the plantation as 37 years, the diameter growth of the former would be equal to 1 inch in 5 years. In other words, the trees in the lee of the hill have grown almost twice as fast as those in the open. The height growth bearing very much the same proportion, as will be seen from the following table:



Walnut Plantation No. 2.