

plant plays in its own particular zone. For, armed with this knowledge, it becomes possible by artificially introducing a given species at the appropriate moment to hasten the passage of one phase into the next, and thus promote accretion without pauses or delays. Should this practice be adopted we should look forward to a time when, by vegetation methods, combined with temporary engineering constructions for protection from scour and the control of currents, tidal lands would mature for final reclamation not only more rapidly than is at present the case, but also in topographical distribution conveniently for the purpose. It has been a principal object in writing this book to emphasize the importance of plants from an engineering point of view.

The Measurement of Vertical Rise in Level of Salt Marshes.—Information on this subject is hard to come by, except in districts like the Isle of Axholme in N.W. Lincs, where the operation of warping is practised. Warping consists in admitting tidal waters heavily charged with silt on to banked lands which lie below high-water mark, and allowing the silt to deposit. By continuing the operation for a period of two or three years (two tides a day for some ten days per month) a thickness of 1, 2, or occasionally even 3 feet of silt is thus deposited, the thickness depending on the richness in silt of the tidal waters employed and the skill with which they are led to and distributed over the lands to be warped.

On the Blakeney marshes a few experiments extending over a period of two and a half years have been made, and as the results are sufficiently numerous and consistent to be accepted as reliable a few of them may be quoted here. It will be understood, of course, that these are records of the natural silting process unassisted by any of the artifices of warping, and that the tides, unlike those of the Humber, are not heavily burdened with silt. The texture of the deposit is fine, and sand is practically absent.

Example 1.—High salting bearing Obione covered by the higher spring tides, say 120 tides a year. Rise of level in 2 years 5 months, 0.4 inch. At this rate the rise would be 1 foot in 72 years.