

land the traveller reaches the edge of a drier alluvial plain covered with a thin forest of natural pine. The soil is poor and sandy. Farther inland another terrace is reached which is void of trees, the only natural covering to the thin soil being a species of grass. This soil can be tilled, and though deficient in water supply will yield fair crops of corn. Still farther in this prairie is passed and hilly slopes make their appearance, upon which clays and loams of various qualities and capabilities occur.

These changes in agricultural character and capabilities are coincident with the changes in the geological strata which form its surface.

It is necessary to guard the reader against occasional disappointment when he proceeds to examine the relations between soils and the rocks on which they rest, or to infer the quality of soil from the known nature of the formation on which it lies, in conformity with what has been laid down, by mentioning briefly another set of forces which present themselves in nearly every country. Wind and water as well as glaciers already mentioned, are

strong transporting agencies. Hence, in many places, the rocks and the soils naturally derived from them are buried beneath accumulated heaps or layers of foreign materials, each carried thither by its respective agency. On these accumulations of transported materials, a soil is produced which often has no relation in its character to the rocks which cover the country, and the nature of which, therefore, one could not predict from an acquaintance with the formation on which it immediately rests.

But though it may be true, that here and there the natural soils are masked or buried by transported materials, yet the political economist may, nevertheless, safely estimate the general agricultural capabilities and resources of a country by the study of its geological structure, the capitalist judge in what part he is likely to meet with a profitable investment, and the practical farmer in what locality he may expect to find land that will best reward his labors, that will admit of the kind of culture to which he is most accustomed or by the application of better methods will manifest the greater agricultural improvement.

