

For this reason, mountains consisting of quartz or porphyry, for example, very frequently present surfaces destitute of vegetation; while, on the other hand, those of granite, slate or sandstone, are more frequently adapted for agriculture and planting. In the northern parts of Scotland, quartz rocks, destitute of all vegetation, rise in the midst of mountains covered with gramineous plants, and sometimes wood. In the most fertile part of the south of Norway porphyritic mountains rise from a calcareous and schistose base, with lofty, rugged, and bare cliffs. In the southern parts of the Tyrol the rocky sterility of the abrupt and lofty porphyritic mountains presents a striking contrast to the fertility of the neighbouring limestone mountains, which are covered with vines, walnuts and chesnuts.

The *surface* of the solid strata of the earth has also an indirect influence upon the cultivation of plants, in so far as the water which the vegetable mould acquires from the atmosphere, is retained in the soil, or is drawn off by the subjacent rock. Different rocks produce very different effects in this respect, depending as well upon their constitution as their structure. The component parts of rocks imbibe water in different modes and degrees; and different sorts of rocks not only attract water with different celerity, but also imbibe different quantities of it. The latter difference depends chiefly upon the various substances of which rocks are composed, partly, also, upon their porosity. Siliceous rocks attract water in the lowest degree, argillaceous ones in the highest, and calcareous rocks appear to have an intermediate action in this respect. Compact and granular crystalline rocks attract water in a smaller degree, and more slowly; friable or crumbled rocks imbibe it in greater