

increased to a prejudicial degree. In land of this nature, a substratum of rock having the property of drawing off the water would be useful.

The different conditions of rocks with regard to caloric, may have some indirect influence upon the vigour of plants. Heat, whether imparted to the vegetable soil by the sun's rays, or generated by various chemical processes in the earth itself, penetrates to the surface of the subjacent rocks, and is more or less drawn from it in a longer or shorter time. Columella observes, that rocks in the upper part of the soil are prejudicial to vines and trees, but in the lower part cool them. The heat of soil will be more or less drawn from it, according to the greater or less conducting power of the subjacent rock. Compact crystalline rocks are probably better conductors of caloric than those which are of looser texture; siliceous rocks than argillaceous and calcareous ones. The influence of the subjacent rock must be greater in this respect, in proportion to the thinness of the superincumbent soil. The effect of the abduction of caloric is more particularly sensible, where the roots of cultivated plants touch the rock, a circumstance

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(the thickness of its edge being equal to the width of the furrow), by the help of an axle and wheels, would greatly compress a light, porous subsoil. The idea of forming a pan artificially, struck me first in Norfolk; and time and experience have strengthened it. If the experiment be made on a compressible subsoil, as sandy loam, or the soft rubble which sometimes intervenes between an absorbent soil and an open rock, there can be little doubt of its success. But on loose open gravel, which is not sufficiently mixed with tenacious mould to sheath it, and lying on an open base, less utility may be expected from it."