physiology, vegetable chemistry, and geology, require some better direction to attainable objects, than botanists, chemists, or geologists, are likely to furnish. That plants, by growing frequently on the same spot, poison the soil for themselves, though not for other plants, appears a reasonable generalization of well-known facts: that certain successions of crops are best fitted for particular soils, is incompletely known by experience, and may be turned to a profitable account by the union of botanical and chemical research.

The chemical quality of soils, to judge from a superficial examination, appears to be of real importance. Why else, amidst the heather which covers thousands of acres in the moorlands of the north of England, should there appear not one plant of Dutch clover, though upon the removal of the heath, and the application of quick lime, this plant springs up in abundance? Why else does Cistus helianthemum love the calcareous soil, the oak delight in stiff clay, the birch and larch flourish on barren sand? Yet, to all the conclusions drawn from facts of this nature, exceptions arise, and the *relation of the soil to moisture* appears quite as fertile and general a source of difference of vegetation and productiveness, as any peculiarity of chemical constitution. We once took the pains to notice every species of plant growing on a purely calcareous soil 2000 feet above the sea, on Cam fell in Yorkshire, and among them all, it appeared that not one was commonly supposed peculiar to limestone.

It appears to us that it is chiefly by their various power of conducting moisture from the surface that rocks of different kinds influence the soil above them; and this is a circumstance which is sometimes interesting to the farmer, for another reason. It is not doubtful that in many cases there is a possibility of draining land which is underlaid at some small depth by a jointed calcareous rock, just as by sinking a few feet in a mining country, through clay to limestone, the whole