

it otherwise will not bear, his prospect of success is very small. Thousands of farmers try such experiments in various directions, the result of which is a mass of practical experience forming a method of cultivation which accomplishes the desired end for certain places ; but the same method frequently does *not* succeed—it indeed ceases to be applicable to a second or third place in the immediate neighbourhood. How large a capital, and how much power, are wasted in these experiments ! Very different and far more secure, is the path indicated by *science* ; it exposes us to no danger of failing, but, on the contrary, it furnishes us with every guarantee of success.”—(LIEBIG.)

Every farmer, however small his farm, would do well to establish a limited series of experiments for his own information. But such experiments should be conducted throughout the country according to one uniform plan and system. The mode of proceeding is sufficiently indicated by the nature of the information sought. Accuracy of description of every circumstance connected with the experiments is of paramount importance. It is not to be presumed that even an approximate analysis of the soil is to be obtained by the means which lie within the reach of the ordinary farmer ; but no difficulty presents itself in ascertaining whether the land is of a clayey or sandy nature, whether it is a calcareous soil or a vegetable mould. The nature of the experiments must in a great measure depend upon these considerations, and that the results arrived at may be of general utility, no experiment should be commenced without some special object in view, some definite and fixed subject of enquiry to elucidate. If this be not the case, the name of experiment is no longer applicable, and the probability of fallacious views being created by its means, is almost equal to the improbability of useful discovery attending its ultimate results ; and it has to be particularly borne in mind, that no experiment can be considered as constituting a proper source of information which does not embody a description of the mechanical condition of the soil and subsoil ; of the crops grown the preceding year ; the amount and kind of manure applied to the land ; an accurate description of its situation : the depth to which it has been ploughed ; together with any particular circumstances relating to rain, temperature, period of sowing and reaping, diseases, &c. &c. An acquaintance with the general outline of the science of Organic Chemistry, and with the chemical constitution of soils, will direct the farmer in experimenting upon all varieties of soil, with reference either to rotations of crops, or the application of manures,—and it will also suggest to him those kinds and species of vegetables whose introduction into this new country is daily becoming a more desirable and advantageous attainment. A proper rotation of crops may be made to bear with much profit upon the produce of the dairy and the fattening of cattle. There exists under all circumstances a fixed ratio between the condition of a farm, and the number of live stock which can be most profitably kept upon it. The value of that ratio depends upon the cultivation to which the land is subjected, and particularly upon the rotation adopted. The keeping of a certain amount of live stock upon a farm, ought not solely to have reference to their mechanical power or dairy produce ; it frequently happens that care in the preservation of stable refuse, and a judicious application of the various substances of which that refuse consists, is indirectly a source of far greater profit than all the surplus produce of the dairy, and although farmers are apt to bring objections against a system which imposes an apparent excess of labour in a country where land is cheap and labour dear, yet it is to be re-