EXPERIMENTS—HINTS FOR THE BOARD OF AGRICULTURE.

To the Editor of the Agriculturist.

SIR,

In the present state of agricultural science, when the economy of applying certain artificial compounds to the soil for the purpose of increasing its produce, or maintaining its fertility, has become a necessary study to the farmers of this country, it is the duty of our Agricultural Associations to assist them in such investigations, and to endeavor by well digested and carefully conducted experiments, to throw some light upon the various important subjects which are connected with this inquiry.

It is true that we have had experiments made in this country, the results of which have been communicated to our Agricultural Journals; but it must be admitted that very few of those which are recorded are capable of being employed by the scientific agriculturist in directing his practice, having in general been conducted without those precautions which are absolutely necessary to render experimental investigations of any real value, and we therefore find that the results are not regarded with confidence by the public.

In our well organized Board of Agriculture, numbering among its members some of the leading agricultural improvers of the province, we possess special advantages for arranging and carrying out such experimental inquiries respecting the effects of manures, and the economy of their application, as may tend to place our knowledge of this department of agriculture upon a foundation likely to advance the interests of the Canadian farmer, and at the same time to extend our knowledge of the laws which regulate the developement of our crops.

The board might direct their attention to the propriety of instituting a series of experiments with such fertilizers as bones and guano, more especially when applied to turnips; and to test the efficiency and economy of the various compounds of ammonia. They will be true benefactors to the country if they undertake the task, and carry it successfully to the end.—By such experimental investigation in the field, they will do more to advance agriculture and to awaken the attention of the public to the value of science, than by any other plan they could adopt.

One of the most important steps which the agriculture of the present day has yet made towards its establisment as a science, has resulted from the light which the researches of the chemist have thrown upon the nature of the connexion which exists between the soil of a field and the crops which are grown upon it. The fact that every plant, even the weed which springs up in the neglected field, abstracts from the soil a certain amount of earthy matter for its development, and which therefore it is necessary that it should contain to come to perfection, though for a considerable time recognized, has only within the last few years been employed to direct the practice of the farmer. But the mere knowledge that every plant requires for its growth a certain number of mineral ingredients, was insufficient to explain how a field, in the highest degree fertile to one particular crop, was incapable of yielding a remunerative return of a crop of a different kind. The difficulty however, so far as the chemical constitution of the soil is capable of influencing the growth of any particular crop, has been satisfactorily removed by the conclusion which innumerable analyses of both wild and cultivated plants have led the chemist to form, that the different families of plants require the materials of the soil in very different proportions; and also, that a plant like the turnip extracts chiefly, matter of a different kind from those selected by the wheat and other plants belonging to a different family.