flown language, as to elicit from many of those practical people who read the work unmitigated ridicule, while many were deterred from looking further than the title page and the first chapter or two, and then threw the book aside as altogether theoretical, and unworthy of attention. Those, however, who looked deeper into things, found amonast the verbiage of the work a great deal of valuable information and material for thought.

Mons. Ville, having the full support of the French Emperor, proceeded from his theoretical experiments to those of actual practice ; he selected the poorest farm he could find, divided it off into sections, and having by analysis ascertained exactly of what the land consisted in its then present state, proceeded with his practical trials. One set of compartments he devoted to the successive cultivation (year after year) of one special sort of crop. Wheat followed wheat, barley followed barley, peas followed peas, and green crop followed green crop year after year, without rest or intermission. IIe now brought to bear the information he had acquired in his burnt sand, and added each year the general chemical manure, composed of all the before mentioned chemical substances, but only in so small a proportion as to produce the first growth of the crop, whilst in addition to the general manure, he added an increased quantity of the special element which the particular class of plants of which the growing crop consisted would abstract from the soil.

Thus, for his wheat and cereal crops he added to the soil, in addition to a certain quantity of general manure, a considerable portion of ammonia-ammonia and the various matters which produce it being the special manure for wheat and cereals generally.

To the land on which he sowed peas, beans, clover, etc., he gave the same proportion of the general manure, and in addition a quantity of potassa or potashpotash and its equivalents being the special manure for the pulse crop.

To the land on which he intended to raise roots he applied the same general manure, and in addition the phosphatesthose and their producers being the special manure for all roots.

years' experience, he could so exactly ap- triumph of the chemical manures over portion his materials that he could take those of the barnyard or stable, and that out a full crop of any particular kind, to an extent of from thirty to fifty per leaving the ground in so poor a state that, cent., the cost of both kinds of manua without the annual addition it would not being taken into consideration as well as produce more than it would have done the effect.

his labours in such elaborate and high-| when he commenced to use it in its original state of poverty.

> He also contended that by his system nothing was lost. If he applied a little too much of the general or of the special manure required for the use of the crop that year, it remained in the soil as available for the next year's crop.

> As against this, however, must betaken into consideration the leaching away by the rains and natural waters of the soil of the excess of any mineral salt which had been added in so large a proportion as not to combine chemically with the elements of the soil. When combined, the roots of the plants alone could extract it. If in too great proportion, the roots of the plants seized on the overplus before they drew on the chemically combined elements of the soil, and thus is shown the importance of only adding to the soil soluble chemical manures in the spring and summer, while the roots are in fullaction, and can avail themselves of it; whereas the same soluble matter added in the winter season or in the fall passed off during the leaching of the winter's rains, and was lost to the .griculturist. On the other hand, chemical manures, not specially soluble, might be added to the soil at any time, and produce the proper effect in due season.

In addition to the before described compartments of the experimental farm, another set of compartments was applied to the production of the same kind of crop, sown and cultivated in the usual manner, but manured as before with chemical manures; and again other sets of compartments were applied to produce similar crops in a similar manner, but manured with barnyard and stable manure alone; and a last set of compartments was devoted to the production of unmanured crops, which only received assistance from the cultivation and moving of the soil in a state of nature, the use of the bare fallow, and the usual rotations, but always altogether without ma nure or stimulant of any kind.

This experimental farm was annually inspected by all the savans and acknowledged authorities on farming matters that could be got to look at it, and the results were carefully tabulated and noted in the records kept by Mons. Ville and his assistants.

The deductions drawn established, in We are informed that, after a few Mons. Ville's estimation, the thorough

Not only was this advantage apparently secured, but the additional benefit was claimed that the chemically manured land not having the seeds of plants carried to the soil with the manure, became year after year more free from weeds and extrancous vegetation, while the land manured with ordinary stable and barnyard manure became foul with the weeds arising from the seeds returned to the soil in the manure, and which had not been destroyed by fermentation or moisture.

The latest recorded results are as follows:-

The experiments on wheat numbered 138, and the result in round numbers gave an advance of about nine bushels per acre in favour of the chemical manure. the cost of the chemical and of the natural farm manure being the same.

It was also found that a greater average of good crops annually was obtained from the chemical manure than from the other.

The experiments on potatoes produced similar results, also in favour of chemical manure.

83 experiments produced an average: From chemical manure of nine tons, or 389 bushels per acre.

From farm-yard manure, 7 tons 7 cwt., or 317 bushels of potatoes per acre. (No doubt the French acre is here meant.)

From 160 experiments with beet root (sugar beet) the result gave an amount in favour of the chemical manure of within a few pounds of four tons per acre.

There are now experimental farms of this kind established all over France, in order to convince farmers by actual personal experience and inspection of the advantages to be gained by chemical and scientific knowledge, when applied to farming.

The results in the French colonies of similar operations, conducted on the same principles, have not been less conclusive. The owner of one of the best and largest plantations in Guadaloupe has found that the chemical manures possess the same advantages over ordinary manures in the growth of the sugar cane and other tropicalcrops that they do in France over ordinary crops—and it would be only multiplying instances to an unnecessary extent to adduce further results.

But it may be said by the Canadian farmer, "What is the use of all this to me? We cannot get chemical manures." In reply we say that information of what is going on in the rest of the world ought to be known to Canadian farmers as well as to every one else; that although we have not now chemical manures at hand, they are every day approaching us; that