introduced into England as early as 1804, and is probably still cultivated there. To us in Canada, however, it matters little if a member of the Highland Society of Scotland has made a novelty of a plant well known in France and England; if the crop is new to us, and likely to be advantageous, let us introduce it at once.

It appears to me that this plant, on account of its very rapid growth, will become very profitable in Canada, both for green fodder and for hay; although, according to the French agriculturists, it is a little inferior as fodder to the common red clover, (*T. Pratense*).

The Crimson Clover may be sown with grass seed in spring, and will be ready to cut in July, nor will it interfere with the growth of the permanent grass. It will also be useful to cover spots in which the grass may have been winter killed. It must be observed that it is an annual plant, and perishes in autumn, but if sown on the stubble in September or October, it is sufficiently hardy to endure the most severe winter and may be cut in the following June. Almost any soil which has carried grain crops will produce the Crimson Clover.

I may add that the Crimson Clover figured in the Exhibition at Paris, and is classed in the report of the jury with red clover, lucerne, and other plants too well known to require any special mention in connection with agricultnral improvement.

I am, &c.

AGRICOLA.

St. Joachim, April 15.

[Our correspondent is quite right in stating that the Crimson Clover has long been known in France and England; and perhaps the essayist quoted in our last number only called it new as being so to Scottish farmers. Notices of its culture in England and Scotland will be found in Sproule's Practical Agriculture, and Stephen's Farmer's Guide; and from the latter it would seem that it has been known in Scoland at least since 1837. Stephens also states that a mere harrowing of the surface of stubble land forms sufficient preparation for it without ploughing, and that it suffers in Scotland, when sown in autumn, from the winter and spring frosts. It succeeds well in the South of England, especially on the chalk soils, so that it would probably thrive on the drier limestone soils of this province. It may be very useful here in filling up head ridges and waste spots, in providing a rapid growth of green fodder for summer and autumn, and in serving as a substitute for green crops on fields which the farmer cannot find time to cultivate in roots. It is said to be well suited to this last use in consequence of its power of choking weeds, and yielding when ploughed up much organic matter to the soil. We trust that experiments will be made with it, and that our correspondents will give us information of the results.—ED. F. J.]

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Experiments on Manures.

At this season it is not to be supposed that even the most intelligent agriculturists can have much time for "book-farming," except perhaps to consult a good work, or turn over a volume of an agricultural journal for a hint as to any practical difficulty in the spring work. Yet we should like to occupy a half hour in the noon-day heat, or in the evening after work is over, with a few remarks on scientific farming in its relation to agricultural experiments, and especially to experiments on manures.

Many farmers have made up their minds to try in the present spring new methods which they have found in their reading during winter, or which have occurred to themselves. More are trusting to the success of methods approved by experience, and some are perplexed by the failure in late years of means previously successful. Now in reference to these several states of mind, the science of agriculture teaches the following important truths: 1. Experiments should not be made blindly without knowledge of the materials employed, or the circumstances in which they are to act. 2. A manure or a method quite successful on some other person's farm may be quite useless on yours. 3. A manure or method may be very advantageous for a time, and then become useless even on the same farm.

1. For an instance of the first of these truths, we may refer to the experiments of Messrs. Lawes and Gilbert, in England, criticised by Liebig in his late work, "Principles of Agricultural Chemistry." These gentlemen supposed in the first place, (in which supposition they were quite wrong,) that chemists maintained that potash, bone earth, and the other substances found in the *ashes* of wheat, are the only things that require to be added to the soil to increase the crop; or, in other words, that in any soil mineral manures containing the ingredients of the ashes of wheat, are alone sufficient to maintain and increase the production of this grain, without paying any attention to the materials of a different character, (nitrogenised organic substances,) which have been supposed to be supplied by the richer parts of animal manures. Now, if any one had really held this one-sided theory, it would have been very useful to have disproved it by experiment. But to have given the experiment a fair trial, it should have been made on land incapable without manure of producing wheat. This was not attended to. A spot was chosen which could produce, as the experiments showed, a number of crops without any manure, and on this land while the plots manured with mineral manures produced hardly anything more than the unmanured, those supplied with nitrogenised manures showed a marked improvement. The conclusion deduced was that mineral manures are useless, whereas the only thing really proved was that the land experimented on contained enough of the mineral ingredients of wheat to serve several crops. Thus this costly series of experiments, extending over ten years, really gave no new information, but only served to mislead the experimenters.

This great blunder, however, well illustrates the general truth in reference to *special* manures of all kinds, as distinguished from those barn yard manures containing the materials originally obtained from the soil itself, which we are always safe in preserving and applying at almost any cost of time and labour. Every cultivated plant requires from the soil a number of ingredients, which the chemist has ascertained with respect to all the more important plants. A soil capable of producing any plant without manure must have *all* the ingredients required, and a soil barren, naturally, or run-out by cropping, must want or have lost one or more of those ingredients; and in such cases the safe course is to ascertain by reference to good works on agriculture what manures afford in the cheapest form the several materials required by the particular crop, and to apply these on a limited scale to portions of the same soil, and carefully note the results. Such experiments are sure to be profitable, but care must be taken not to extend their results to other soils, or to suppose that the same manure will always be successful on the same soil.

2. This leads to our second principle, that special circumstances must always be considered in introducing methods or manures recommended by others. A farmer living on a soil very deficient in lime, applies a moderate dressing and the results are extraordinary, because previously the crops were stinted of that material. He announces the great effects, and another farmer cultivating