No. 8 *Diehl*, a new variety of red or amber wheat, approaching nearly to whiteness at times; now much sought after. There are evidently heads from two separate fields, as some are very short in the ear, nearly quite ripe and of a dark russet yellow color, while others are quite green with somewhat longer ears; heads from one and three quarters to two and one quarter inches long, quite bald, square-sided, very plump; berry very large, round and solid, covered with a hard flinty chaff of a reddish color, straw stout. This is to all appearance the best wheat of the lot, and the heads are unusually heavy in proportion to their size. It is said to have proved perfectly midge proof, but as we notice no signs of midge in any of the samples, the question of the immunity of each of the above varieties will hardly have a chance to be decided on Mr. Zimmorman's farm at least. From fifty to one hundred heads were sent in each sample, so that if any midge had been in the heads they could hardly escape detection. It is not often one gets the chance of comparing the merits of so many varieties of winter wheat grown on one farm, and under nearly similar circumstances, and we feel greatly obliged to Mr. Zimmerman for the interest he has taken in sending us the samples, and trust he will let us know the result of the yield of each after harvest.

Wheat and Clover.

To the Editor.

Sir,—I read Dr. Voelcker's lecture, the subject of your article, "Wheat and Clover," on page 215, vol. 1, No. 7, 15th July, 1869, in the Canada Farmer.

You quote the Doctor thus:—

"I have come to the conclusion that the very best preparation, the very best manure for wheat, is a good crop of clover."

You recollect R. B. Sheridan's witty and wicked critique of a member's laboured speech in the British House of Commons. "It contains something new and something true. What is true is not new. What is new is not true."

Clover is an excellent preparer of the ground for wheat. That is true, but it is not new. From remote ages the farmers in the south of England have sown their wheat in the autumn on their clover leys. But I will show you that the truth contained in the Doctor's position is only partially true. It is only in the south of England that wheat succeeds after clover. In the north of England it fails. In Yorkshire, Durham, and all northern counties, the farmer takes oats after clover. Sir James Graham many years ago tried to introduce the south of England plan on his Cumberland estates. He offered great inducements to his tenants. They sowed their winter wheat on their clover leys, and were half ruined by the unfortunate result. So much for the true (in part) that is not new.

Now for the new that is not true.

It will be new to all old country farmers to be told that "the very best manure for wheat is a good crop of clover."

As I have said, under some circumstances wheat after clover fails, and even in the south it is only on the light sandy soils that clover beats farm-yard dung. If that dung were rotten and solid it would beat the clover on the light lands too. To grow wheat at all on those lands it is absolutely necessary to make the land compact. A heavy bevelled iron wheel follows the plough and compresses the furrow, forming a hard-bottomed drill for the seed. If farm-yard dung, in the condition it is in when generally used by farmers, were ploughed into the light land, the "presser," as it is called, would have little effect, and the crop would be lost. On land of a moderate consistency, good heavy loam, the farm-yard dung would produce a much better crop than clover. And then all good farmers in the south of England top-dress their wheat. Some use guano, some soot—any ammoniacal dressing.

Hear the Doctor again:—

"We should naturally expect that clover, which removes so much nitrogen from the soil, would be greatly benefited by the application of nitrogenous manures; but the reverse is the case."

The reverse of benefit is injury; *ergo*, nitrogenous manures injure clover.

When I lived in Hampshire, in England, I had a neighbour, a farmer, who on one hundred acres of land kept twenty milking cows, a flock of sheep, and lots of pigs and horses. He was also agent in that district for Messrs. Gibbs & Co., who had the monopoly of Peruvian guano. One day the farmer asked me to look at his clover. We went into the field—one half of the crop was cut, the other half standing. He called my attention to a line which ran across the top of the crop that was uncut. The line was caused by a part of the clover being about six inches higher than the rest, and also thicker and bigger. The farmer said the whole of the field had had a good dressing of farm-yard dung, and the part that was so much better had, besides that, two hundred and twenty-four pounds of guano to the acre. Here was a fact that proved what every farmer knows, that clover likes nitrogenous manures, farm-yard dung for instance.

I have noticed these two points of the Doctor's address, because they contain a warning to farmers not to rely too much upon the chemist. The world owes much to chemistry, and if attainments could be made hereditary, and accumulate in families through generations, we might in time rely upon its dicta. Life is short, and much that a man learns dies with him. Therefore, up to this time, chemistry is only a faint shadow of natural history. Many demonstrated closet conclusions turn to fallacies in the open field. Chemical analysis of soils is in that sense utterly fallacious. Those given by Dr. Voelcker would be so. Scientific men, and especially Professors, are too much given to systematizing. They would bring the world under their square and plummet. There they go wrong. Nature has her own processes of assimilation that the chemist has not examined, will never be able to examine, and will never understand.

The wisdom of the world of agriculture has other sources than the laboratory of the chemist. I remember an old farmer in England who used to mix his fresh stable dung with unslaked lime. The chemist threw up his eyes and hands, and said "My good man, you must not do that; it is against the fundamental laws of chemistry. You will be ruined." The farmer said, "I know nought about that. I've always done so and I've always had good crops." The chemist tried again, and found that the farmer was right. I need not give you the chemist's formula on either side. The fact is all we want. Dr. Voelcker is in the same position on wheat and clover. He will have further experience, and then he will find that what he has stated absolutely is only true relatively.

In agriculture, the difficulty is to separate the practical in chemistry from the unpractical. A farmer may commit fatal errors by following the chemist implicitly. If he follow him systematically, continuously, and blindly, the farmer would die a pauper, indebted to his friends for his funeral—he would not leave money enough to buy him a coffin.

W. R. CARTER.

Heavy Alsike Clover.

To the Editor.

Sir.—I have to-day sent you a sample of my Alsike clover which I think will be hard to beat. There was a large breadth of ground seeded to Alsike clover in this locality last year. The summer was unfavourable for it, it being so very dry, consequently it did not get a large growth by the fall. Many who had sown it were fearful that the cold winter weather would use it up; but it did not injure it in the least; it came through all right, and will in most cases produce a very heavy crop of hay, and also of seed. In many fields that I have examined it has made a most remarkable growth. In the sample sent you, it varies from six feet to six feet ten inches. Farmers who have raised it this season will do well to let it ripen its seed and thrash it; as it then makes good hay, and they will get a number of bushels of seed to the acre, for which (judging from last spring) they will find a ready sale, next spring, and at good prices.

H. M. THOMAS.

Brooklin, July 22nd.

Note.—The samples sent us were very heavy and strong, measuring six feet nine inches from blossom to root.