Rotation of Crops.

To the Editor of THE CANADA FARMER:

SIR.—An article lately submitted to you on the above subject has, in a measure, had its desired effect in calling attention to a subject daily growing upon us. Our lands, by a course of exhaustive cropping, have become much deteriorated, and the question arises, "how shall we restore our farms to something like their primitive fruitful condition?" The great hope and anxiety of our pioneer fathers, in contending with the forest, was to start the plough. They well knew the hidden treasure under the old logs and stumps, and these once out of the way, nothing more was needed than to tickle the surface a little with the plough, and fields would smile with rich golden grain. When the new pioneer neighbour came to see his friend, and, in their meanderings over the farm from one promising field to another (he with big expectant hope in his breast that his own fields will soon present a similar token of wealth), is ready to exclaim, Ah! neighbour Jones, what wealth lies with the plough!"

But the plough once started, in their enthusiasm they entirely forget where and when to stop, and the chorus of the songs of their sons, as their successors, has ever been, plough! plough! plough!! The effect of this unvarying course has been eminently successful in the present day and generation, in the accumulation of debt and mortgage, and of almost driving some of our best cereals from the country.

The wheat crop was once the pride and glory of our country, but now where is its head? Bowed down, not with the shining over-stocked load as of yore, but in shame for the treatment we have given it. Rise, fellow-men, for the honour of our profession, and with the advent of our new Dominion, proclaim the restoration of its soil, and in a few years, at most, our country may be outrivaled by none, and envied by every foreigner who may chance to stroll across one of the fairest fields of North America. Now, I claim that the chief corner-stone of restoration is *system*, and without system, the restoration of our lands will be a snail's gait enterprise.

I accept Mr Smith's strictures on the plan I submitted, but would ask, is it advisable to have the hoed crop in the rotation where he places it? Would it not be far better to have it to follow the sod, as the hoed crop will then have the double advantage of being easily worked, and the soil soft and spongy, which is almost indispensable to the culture of the crop.

M. OLIVER COLE.

East Elgin, July 16th, 1867.

Wheat—When to Harvest.

A southern farmer once told the writer of this, that, in the previous year, he grew 300 acres of wheat, which, in June, had attained a huge growth, and appeared remarkably promising. The agricultural papers were then recommending to harvest early, while the grain was in the milky state. He followed their advice, and cut the whole 300 acres as soon as the juice of the kernel began to whiten. The grain shrank badly. He estimated his loss from too early harvesting, at $5,000. The blunder, as estimated by the writer, and by the gentleman himself, who, by the way, appeared very candid, and was willing to take his full share of the blame, fairly belonged, about one-half to him, and the other half to the agricultural journals of the time. The latter had blown too strongly, and altogether too indiscriminately, on the benefits of early harvesting, and he had followed their advice to excess—had cut his wheat in a greener state than they had recommended—had misunderstood them, to an extent which he freely confessed was inexcusable.

The truth is, there are four conditions to be considered, or four periods to be noticed in the growth and maturing of the grain; 1st, the *ante-milk* period, while the juice is yet greenish; 2nd, the milk period, while it is white; 3rd, the dough period, while the interior of the kernel, if crushed between the thumb nails, has the complexion and about the consistency of unbaked bread; 4th, the period of ripeness, when grain has become too hard to be crushed between the thumb nails. The nick-of-time for cutting wheat is at the end of the milk period, while the whiteness of milk is turning to a brownish dough colour. Better earlier than later, but as near that time as circumstances permit.—*Farm and Fireside Journal.*

The Marsh Harvester.

THIS is the name of a new reaping machine, which appears to be very favorably estimated, and to be coming into extensive use in the Western States. Its chief peculiarity consists in the facility afforded for binding the grain, which, as fast as cut by the sickle, is carried forward by an endless apron to the binder, who rides on a portion of the machine, and is thus saved all the labor of walking, and much of the stooping. In ordinary crops, it is said, one binder can bind all the grain as fast as the machine cuts it; but in very heavy crops two would be required, and there is provision for accommodating two. The problem of constructing a machine that shall bind the grain as well as cut it has repeatedly been attempted, but hitherto with very imperfect success. This new invention seems to approach very near the desired object, and to combine many important advantages.

An interesting trial of this reaper, on a mixed crop of rye and timothy, recently took place near Bloomington, Illinois, and is thus referred to in the *Prairie Farmer*.—"One span of horses drew the machine with apparent ease and gave no sign of lagging, and we should judge would find no difficulty in doing so throughout the harvest. The rye was green and heavy, which, with the timothy, might be considered equal to cutting the heaviest grain.

Several persons who had never seen one of the machines, made trial of binding, and in each case without aid, and found no difficulty in keeping the machine clear of grain. They were unanimous in the opinion that one ordinary binder could work through the day, binding eight to ten acres of light grain like this; but in heavy grain two would be required.

A German by the name of Fraber had purchased one of these machines, upon the representation that two persons could bind the grain, and having two daughters who had been in the habit of assisting him on the farm, was present with them to see how it would work.

They had not seen the machine before, but on trial found no difficulty in either of them binding alone as fast as the team could cut it. Mr. F. has one hundred and twenty acres of wheat and oats, and the young ladies expressed themselves as confident that they could put up their father's harvest with comparative ease.

The machine runs without noise and jar, and unless you see it, you may not know that it is at work. This is accomplished by the very superior mode of attaching the sickle, and the simplicity of the gearing. The whole is a happy compensating arrangement of working parts. The machine cannot well be other than durable, for there is no strain on any part of it. In this respect it must challenge the admiration of the farmer.

But its great feature is in the saving of labor, and that labor that most severely taxes the farmer during the harvest. To the farmer's wife it is a boon of great value, for she will not have a small army of extra hands to feed during the heated season. One of the Misses Fraber remarked that she preferred binding on this machine to cooking for a large lot of harvest hands.

An awning of common sheeting over the machine, protects the driver and binder from the hot sun of the long harvest days. To relieve the feet from the hot stubble, and to shield the head from the burning sun of July and August, is worth something, to say the least.

The saving of the grain is a feature that should not be overlooked in this connection. This depends very much on the manner in which the common reaper is handled; but in this, the cut grain is all carried to the binder on an endless apron, and there is no liability to waste.

We learn that there were made for this harvest, eight hundred and twenty-five machines, and that next year a full supply will be ready for the harvest."

ECONOMY OF MOWING MACHINES.—A gentleman gives as his opinion that a good mowing machine will save a farmer, upon an average, one-eighth of his crop of grass, aside from the fact that "haying is done" much sooner, and thereby a great saving must be made. He says the average height of grass is about sixteen inches, and that a machine mows, upon an average, two inches closer than the scythe, thus saving two inches of grass over the whole surface. If a man cuts forty tons of hay with a mowing machine, he saves five tons of hay, as he would have got but thirty-five tons with the scythe. Calling hay worth, upon the average, $8 per ton, there is a saving of $40 a year in hay, to say nothing of the labour.—*Vermont Farmer.*

☞ A chief reason why young men dislike farming is their father's worn-out fields. To sow clover bountifully is the best way to prevent our youth from tramping the streets of our cities looking for situations and pocket-books.

SAVING SEED PEAS.—Peas for seed should always be picked as soon as they attain full size, before the pods begin to turn. Put them away in the pod to dry. Peas dried in this manner will bring peas the next season from ten days to two weeks earlier than if allowed to ripen on the stalk, and the same rule applies to beans, corn, and almost all garden vegetables, as I have proved by actual experience.—*Cor. Rural American.*

SALT AS A MANURE.—James R. Todd, of Kilsyth, Co. Grey, writes as follows:—"I have seen the opinions of different men with regard to salt as a manure; not only did I see it discussed in the CANADA FARMER, but also in the *Rural New Yorker*. Last spring I thought I would try it, and bought six barrels, and applied one barrel to the acre, on three acres Genesee club spring wheat, at the same time I sowed half a barrel across five acres of wheat in another place. Now for the result. The three acres shot out five days before the same variety sown side by side on the same day, and the strip across the field I can see as plainly as if the one was wheat and the other oats. The reason I applied salt to the club wheat was this: I have been troubled with the straw breaking; and salt is highly recommended to stiffen the straw; whether it will or not I cannot say yet, but I can say that the wheat I salted keeps far ahead of the rest. However, by harvest I will be able to tell you if it keeps the straw bright and stiff, and if the wheat will ripen sooner."

CUTTING TIMBER.—If oak, hickory, or chestnut be felled in August, in the second running of the sap, and barked, quite a large tree will season perfectly, and even the twigs will remain sound for years; whereas that cut in winter and remaining until the next fall, (as thick as your wrist,) will be completely sap-rotten, and will be almost unfit for any purpose. The body of the oak split into rails will not last more than 10 or 12 years. Chestnut will last longer, but no comparison to that cut in August. Hickory cut in August is not subject to be worm-eaten, and lasts a long time for fencing. When I began farming in 1802, it was the practice to cut timber for post fencing in the winter. White oak posts and black oak rails, cut at that time, would not last more than 10 or 12 years. In 1808 I began cutting fence timber in August. Many of the oak rails cut that year are yet sound, as well as most of the chestnut. If the bark is not taken off this month, it will of itself peel off the 2nd or 3rd year, and leave the tree perfectly sound. The tops of the tree are also more valuable for fuel, than when cut in winter or spring. I advise young farmers to try the experiment, and if post fences do not last twice as long, I forfeit all my experience as worthless.—*Ex.*

HOW TO SHOCK WHEAT.—No part of the harvest work, within the range of my observation, is so often unskilfully performed as shocking wheat. A ride around the country in harvest will attest the fact that a field of wheat well shocked is an exception, while fields poorly shocked are the rule; and yet it is easy to do this work well. During my novitiate as a farmer, I was complaining to an old and experienced farmer of the frequent falling down of wheat shocks, and of the strong inducement, consequently, to store wheat before it was well cured, for fear of rain. He replied that wheat shocks need not fall down, and told me how to construct them so that they would not, thus:—Set up six sheaves two and two, slightly leaning together, with their buts well thrust into the stubble; then on each side set up two more sheaves also well thrust down, making ten sheaves thus:— None to be *placed at the ends*. Now embrace the shock with your arms to draw the sheaves compactly together. For a cap, spread and break down the seed ends of two more sheaves, making twelves sheaves in all, placing the two horizontally across each other, spreading the butts as you place them, with the seed ends to the north-west and south-west, and the butts toward the north-east and south-east. This compass arrangement is important; for if the butts are in the direction of prevailing heavy winds they are liable to be blown off. This method of constructing a shock counts the sheaves for you, and it is always found compact and well balanced. If well built, it is, when finished, very much the shape, on top, of an umbrella, and is safe against all ordinary storms of rain or wind. I have myself built such for over thirty-five years.—*Peter Hathaway in Rural New Yorker.*