FARM AND FIELD.

A MODEL FARM.

NOTES OF A VISIT TO THE DRYDEN HOMESTEAD, SOUTH ONTARIO.

We clip from the weekly *Globe* the following valuable facts relative to the grain and stock farm owned by Mr. John Dryden, M.P.P. one of the most intelligent, enterprising agriculturists in the Province. The writer closes a general description of Mr. Dryden's methods in terms following:—Agriculture in his hands rises to the dignity of a science, and combines theory with practice in a way which never allow methods to be followed blindly, or hobbies to set aside the dictates of practical common sense and the necessities of the farm. Money is not wasted in wholesale experiments; what experiments are made are made cautiously and on a small scale. Close observation, the study of the relation of cause and effect, with the careful elimination of what might be termed the accidental, are rather relied upon in the treatment which the land receives. Every field is studied, its capacities for different crops are known quite as well as the peculiarities of the different horses on the farm; and in the application of

A COMPREHENSIVE SYSTEM OF ROTATION

there is no blind and rigid following of routine, but the capabilities of particular portions of the farm, the necessities for further increase of fertility in particular fields, the character of the season and of the previous and present crop, and the demands of the market are all carefully taken into account. The last-named consideration, however, it is not allowed to interfere with his purpose of getting good results on the aggregate of years rather than great immediate profits. Many other farmers may in a particular season receive a greater cash return per hundred acres, but few can show a larger financial result when a term of years is taken, and at the end of that term the whole farm is found ready to repeat the same results, while the farm which has been managed with a view to immediate profits is fertile in parts, poor in others, the large extra results of one or two years having been a draught on the fertility of the soil. Of course Mr. Dryden has reached that position in which he is not pressed to depart from "long range" management. It is not every farmer who can afford to wait, but every farmer cannot too carefully bear in mind the general principle that excessive cropping means deterioration of soil, which has some time or other to be paid for, and is only justifiable when and so far as immediate necessities demand.

Thorough drainage, thorough tillage, liberal and discriminating use of manures and fertilizers, the application as far as practicable of green manuring, are important points in the management of this farm, and the largeness of the crops and available richness of the soil testify to the success which has rewarded the attention paid to them.

CLOVER—SURFACE MANURING.

The rotation of crops covers about seven years, but, as has been said, is not rigid, but is modified by various circumstances. Clover is, of course, one of the most important of the crops and fertilizers. It is sown with wheat on land treated heavily with manure, which if for fall wheat is spread on the surface, and if for spring, turned under by very shallow ploughing. Surface manuring, or the nearest practicable approach to it, is strongly advocated, and is found to bring nourishment to the seed-bed immediately, and to the deeper soil in course of time, so that the full benefit of it is reaped. Manure heaps on the fields are avoided as much as can be; the immediate spreading secures greater uniformity and there is no appreciable loss of ammonia. Some trouble is found with surface manuring where the straw is not well rotted, as it then is apt to clog the seed drills; the remedy is the use of well rotted manure. The soil here being not very heavy, one of the advantages found in using coarse manure, making the soil porous, does not count for much. Mulching has been tried to some extent, and is found to be beneficial in protecting the young wheat from winter killing by exposure. Snow very rarely covers the ground deeply in this part of the country, but probably if it did the mulching would be rather advantageous than otherwise in preventing smothering. Alsik is found, as elsewhere, to stand the frost better than red clover, and is grown very extensively. Its permanence is favourably reported.

NATURE'S WAY OF SOWING TIMOTHY.

Timothy is sown in the fall with fall wheat without harrowing. This is nature's method and never fails to secure a good catch, while spring sometimes does fail. Then as soon as the ground will admit of it in spring the harrow is used and clover sown afterwards. There is no necessity for covering, as if sown early the clover gets a good start with the spring rains. The ground is left in sod for two years, and in ploughing care is taken to plough under as much grass as possible—sometimes the whole growth. The very best results are secured by this manuring. The ground does not run together, but is porous and open, with all that that implies in the way of easy working, easy access of roots to the soil, and the conversion of the richness of the subsoil into available plant food. Wheat is greatly preferred to barley for sowing with the grass crops, as its stubble is stiffer, and being left tall, collects the snow and protects the grass during the first winter's exposure. Grass seed is used liberally in the proportion of one pint of timothy to two pints of clover. Mr. Dryden thinks that grass is sown by himself and others in quantities rather smaller than should be, but says that he finds thorough preparation of the seed bed of more importance in securing a large catch than is the quantity of seed sown.

ROOTS.

Roots follow sod wherever practicable. A skimmer plough, is used in the fall, then a gang plough in spring, working the ground to a depth of two or three inches. When the sod is thoroughly rotten a single plough is used, then the gang plough once or twice. The land should be in good tilth by the middle of May. Then comes early sowing in drills twenty-eight inches apart. The scuffler is used before thinning, and in the middle of June the roots are thinned to about fifteen inches apart. A good scuffler specially adapted to the necessity of the root crop is considered invaluable. There once were thinning matches in this part of the country, but they are now discontinued.

EARLY SOWING OF BARLEY—NO DANGER OF FROST.

Barley follow roots. "No cereal," says Mr. Dryden, "will give more satisfactory results from early sowing than barley. The notion that it will be in danger from early frost is a delusion." This accords with the opinion and experience of many of the farmers, but I have heard it repeatedly contradicted by others whose lands, however, were not tile drained. Therein may lie part of the difference in results. Fine tilth prevents destruction of the roots by frost, which, when the land is well drained, merely increases the fitness of the seed bed and prevents the baking under spring suns which is often experienced on wet lands. Mr. Dryden adds an interesting experience: "Some four years ago," says he, "we had a little field of three acres well drained, which, in consequence, we were able to sow very early, in fact before any others in this neighbourhood. The ground being in good condition, the barley came up in short time and looked well. When about two or three inches high—in its most, tender state—a very severe frost occurred, crusting the ground sufficiently to bear. If frost, injured barley, this crop should have been seriously affected, and believing at that time that there was some truth in the prevailing notion about frost injuring barley, I expected it would be cut to the ground. As the sun rose I hastened to the field, and was astonished to find the blades looking, if possible, greener and fresher than before. Not a particle of injury could be discovered, and no signs of yellow were ever seen on this field during the season. We had at least forty bushels to the acre. The same season one of my neighbours sowed a field of barley after the frost, and indeed, after all frost, for no frost whatever occurred after the time of his seeding. This barley was very yellow when about the same height as mine was when the frost referred to occurred. As no frost could have touched it some other explanation of the yellowness must be given. That and subsequent experiences make me think that the blade turns yellow because the soil is too wet, cold, and poor, but never because of frost. If you sow early you will get more bushels and more pounds to the bushel.

HOW BARLEY SHOULD BE HARVESTED.

"Barley should be harvested," says Mr. Dryden, "before it is really ripe, as after a certain stage even the heavier dews will colour it. It should be bound up where practicable at once and well shocked. If this is well done it will stand almost any amount of rain without being affected. Of course the outside heads will be coloured, but the discolouration does not seem to be noticeable amongst the other heads. If it were well capped and the cap sheaves threshed separately, and the grain from them used for seed, the harvesting of barley would be a more perfect job, and a fine quality would be available for marketing. When the grain is too much lodged to be bound (as mine frequently is), we cut it with a self-rake machine, so as to leave the sheaves as much in winrows as possible. We then leave it in the sun for half a