Some Requisites for Successful Farming.

Dr. G. H. Cook made some sensible remarks about things which are necessary to success in farming, at a meeting of the Middlesex, N. J., Farmers' Club. We reproduce them in part:

Good land is the first essential. The man who holds poor land, or undrained wet land, and does nothing with it, is losing money on it all the time.

The next thing is to get and use all the animal manures he can, by keeping all the stock he can, and by buying it, when circumstances are favorable. The next most important is the roots of clover and grasses. A good sod will give a good crop which would need twenty or thirty tons of manure, if grown on bare ground. There is no way of manuring so cheap as turning under a sod.

Lime and plaster, although somewhat neglected of late years, are of great importance. There are lands in New-Jersey which have grown a crop of wheat every third or fourth year for a hundred years, with no other manure than clover and lime. Often the good results obtained from superphosphate are mainly due to the plaster contained therein. Study and experience have made it plain that ammonia, potash, and phosphoric acid have each their separate uses and cannot be substituted for each other. It is idle to apply an ammoniacal manure, such as guano, to clover.

The farmer should know to what crops these different ingredients of manures can be profitably applied, to be able to use them most economically. Ammonia used freely has given the best crops of corn. There is still considerable uncertainty upon the point of the proper application of manures to different crops, which can only be solved by the experience and observation of farmers.

Now, as in the olden times, no man can succeed in this pursuit without industry, economy and skill. Every one knows that farming is hard work, but the industry spoken of must consist of regular and continuous work; not hard work at one season and idleness at another, but steady, persevering work all through the year. Such labor has not only a surprising influence upon the success of the farmer, but even upon his character. Work must be begun in good season, and continue energetically all day. It will not do to work in a dull and listless way and cut short the day at both ends, or the profits will be likely to be lost altogether.

Economy is another very important essential. Economy not only in spending, but in saving; in the management and application of labor, so that all the work done may be done to advantage. The farmer must have a variety of crops and work, so that all his labor may be advantageously employed all the year. In this way prosperity will not depend altogether upon one or two crops, but, having a variety, the farmer will be more certain of being able to make a living and pay his necessary expenses.

Another requisite is skill. No farmer can succeed without at least a moderate degree of skill in handling tools and managing crops. A knowledge of the proper times and ways of planting is very important. With many crops a failure to plant at the right time, and in the right way, will ensure a partial, perhaps total, failure of the crop. In reference to stock, skill is absolutely essential. Such skill as the farmer needs, must be acquired by practice and experience, and without it he need not expect to succeed.

The Ideal Agricultural College.

In last month's CANADA FARMER, we treated at length of the subject of Agricultural Education and the means to secure it. We gave an outline sketch of the manner in which the School of Agriculture or Agricultural College should be conducted. The President of the Kansas Agricultural College, Rev. J. Anderson, gives his idea of the future Agricultural College in the "Handbook" of the College. We do not see how it is that, with a President holding such clear ideas of the way to make farmers, the Kansas College should be one of those noted for the fewness in number of its students who take to agricultural pursuits after going through its course. President Anderson sees "in his mind's eye," somewhere or other, "an Agricultural College looking so much like the grounds and buildings of a prosperous farmer who did his own repairing and manufacturing, that we of the present, happening by, would mistake it for a little hamlet of thriving artizans, built in the heart of rich and well tilled fields. Nothing in its appearance would suggest our notion of the typical college. Its barns, sheds, yards and arrangement would embody the idea of the greatest utility at the least cost. Its implements, stock and fields would show them to be used for real profit. Its orchards and gardens would not only reveal the success of the owner, but, also, his full determination to enjoy the fruit with the labor.

"We would be quite certain that it was only such a farm—the best specimen of the highest type—were it not for the presence of cheap, stone buildings, one or two stories, scattered among the trees; all of them more resembling mechanics' shops than anything else; some exactly; others not exactly; and yet no two alike. One would be used for teaching practical agriculture, but would as little prompt our idea to a recitation room, as the whole cluster would that of an imposing college edifice. While there would be seats for hearers and a place for a speaker, yet the latter would most suggest a circus ring for the exhibition of horses, pigs or sheep; of surgical operations; Short-horns, when Short-horns were discussed; of plows, harrows or reapers. The walls would be lined with photographs of famous herds, working models of farm machinery, the grain and stalk of cereals. Part of its surrounding ground would be belted with every variety of growing grasses; and another would be for the draft-test of implements, or the trials of student skill. In fact, it would so look, and so be, like an actual workshop of real farming as not, even in the remotest way, to squint toward the article generally y'clept 'scientific agriculture.'

"The interior of another shop, a few rods distant, and equally inexpensive, with its grafting tables, posting benches, packing room, working greenhouse, and outside hotbeds, and thrifty nursery grounds, would look so much like 'gardening for profit' as to throw us completely off the trail of botany as a pure science. Another would be a force shop, where light, heat, water, sound and electricity were made to reveal their laws, habits and effects, and to do their industrial work. * * * *

"There would be a mathematical shop, so much like a counting and drawing room, that, when it led into an inventor's and pattern maker's room, no one could be surprised at its winding up in a machine shop. There would be an English shop, remarkably like a printing office; and the 'Printer's Hand Book' of that day might strike us as an admirable drill in the art of using the English language, as well as in that of sticking type—almost as good as a grammar! There would be a woman's workshop, where the pale Hortense, at heart a good deal more sensible, earnest and womanly than society suppose, would strive for the bloom and 'faculty' of Mary. The blessed Mrs. Grundy would be dead! And there would be mason's, carpenter's and smith's shops.

"Not a shop of them all would cost $5,000, and some, not the half of it; because they would be shops, warm light, cheerful, but *work*shops—not requiring costly foundations and tall, heavy walls, not finished as are parlors, not wasting space in broad corridors. And they would not have been fore-ordained by men of a previous generation, who, to save the lives of the best of them, could not possibly have foretold just what buildings such a college would need. As in the progress of its growth, a want had been felt, its shop was supplied; and each generation had footed its own bills.

"No! it would not look like our great colleges; but very remarkably like a nest of real educational workshops, where flesh and blood students acquired marketable skill for industrial labor In it, drill in the art would have greater prominence than the stringing of facts on the threads of a system; and the requirements of art would serve as a skimmer to lift the cream of science as needed. Knowledge would be shoved paying end first, and not, everlastingly, philosophic end first. For the world would have gotten back to the history of its own experience, when art was the Columbus discovering science.

"In it, educational common sense would have supplanted uncommon educational nonsense. And leaving it, the newly fledged graduate, as does the newly fledged 'jour.,' would at once earn a living. Such an Agricultural College would be in keeping with its object, with the requirements and genius of labor, with itself! And, too, it would be in keeping with a rich, broad State, carpeted by emerald grasses, belted by golden grain, clumped with orchards, moving with herds, clustered with villages, threaded by railways, flecked with countless smoke-offerings from the altars of industry to the God of labor.

"Some day; somewhere; somehow!"

HARES AND RABBITS, it is now found, will carry the foot and mouth disease, and thus render futile the attempts made for the last ten years in England to stamp out that disease. This will add to the strength of the cause of the tenant-farmers against their lords and masters.

AN ENGLISH LAW-COURT recently rendered a decision which is important to farmers. It was decided, when A's mare and B's horse were in different fields, and separated from each other by a wire fence, through which B's horse kicked and damaged A's mare, that this was a trespass by B's horse, and that B was liable in damages for injury done.

THE *Kölnische Zeitung* reports that besides Phylloxera and the Colorado Beetle, a third noxious insect has gone over to Europe from America; it is the so-called Blood Louse, which causes much damage to apple trees. As a practical remedy against this unwelcome guest, the *Garden* recommends the painting of the young tree with naphtha and lime-water.

A STRONG EFFORT is being made to revive interest in the Chinese Yam as a substitute for the potato. They have many virtues; such as growing in poor soil, taking care of themselves and requiring little labor; but they have one immense drawback—and that is, a habit of penetrating the earth to a distance of two or three feet. Fancy coming home hungry and having to go down that depth for your supper. We opine that the Chinese Yam will not entirely supplant the potato in our time.

THE *American Farmer* gives a discouraging account of the condition of affairs at the Maryland Agricultural College, one of the oldest institutions of its kind in the United States. Is says the College has a mere handful of pupils, is in debt, and dissensions prevail in the faculty, as well as in the board of governors. The fact is that these institutions have a natural tendency to kid-glovery. Nothing but the most jealous supervision by the public can prevent their degenerating into the humdrum routine of the models they aim to ape—the Old World universities.

"THE PROGRESSIVE FARMERS" is the sensible name which an association of Illinois farmers have adopted. The object in associating is to improve agriculture by the giving of premiums for the best stock and crops, and to advance the interests of farmers generally. A *Prairie Farmer* correspondent, in whose neighborhood the association is strong, says that the result of offering these premiums has been remarkable. A neighborhood always loose in its manner of farming, at a single stride has stepped at least ten years forward; and that neighborhood, with an average season, will produce 50 per cent. more wheat than ever before, and it will be of a better quality.

THE MICHIGAN AGRICULTURAL COLLEGE seems to be an exception to the general run of Agricultural Colleges in the United States. Those institutions apparently aim to take rank in proportion to the number of agricultural students whom they have diverted from following farming as a profession. The Michigan College seems to have a higher ambition and to be successful in turning out not only farmers, but persons competent to teach farming. Former students at this College now hold good positions in other Agricultural Colleges, on which, doubtless, by-and-by, they will succeed in grafting the principles which have made their *alma mater* the most efficient of its type. In the Agricultural literary world, the *Western Rural* has, on two occasions, recruited the ranks of its numerous editorial *corps* from the graduates of this College. President Abbott, in a recent address, stated that no less than 42 per cent of the College graduates are engaged in farming or gardening pursuits. No other Agricultural College in the United States can approach the showing made by the Michigan College. We trust time will not prove us to be too sanguine, if we express our opinion that the day will come when an Agricultural College that can not turn out half of its graduates as farmers, will rank about as high in estimation as the average Agricultural College now stands.