

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

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ber of farmers the past winter, enabling them to bring their cattle through in good condition at less cost than could have been done by any other means.

The advantages of the silo as a means of preserving corn fodder in a compact and convenient form for feeding are now generally admitted, and the cost of constructing a silo in some of the simpler forms has been reduced to a point where the average farmer need not hesitate to adopt the system. It is very difficult to preserve corn fodder late in the season and towards spring; also, the root supply runs low at a time when a succulent ration is particularly needed. At this point good ensilage supplies a want not easily filled in any other way, and not a few dairymen find it advantageous for supplementing short pastures.

But whether the reader adopts the silo or not, the man who is liable to be short of winter feed for his stock, and who would be in a safe position, will do well to plant a few acres of corn, which, if cut and cured in proper time, may be stored in such a way as to prove a valuable supply of fodder for cutting and mixing with other foods. One point we might emphasize. Choose a variety of corn adapted to the locality, and cultivate so that leafy stalks of good size, well eared and well matured when required for feeding or for the silo, will be produced. Presuming that a largely increased area of corn will be planted the coming season, and that an expression of the experience of successful corn growers would be appreciated, we would be pleased to receive letters from any of our readers who have additional points of value to contribute on the mode of soil preparation and cultivation, varieties found most suitable to their section of country, time of sowing, harvesting and storing.

While the question of corn growing is receiving increased attention and discussion, the root crop, the tried and trusted stand-by of successful stock feeders, should by no means be neglected, but should be even more carefully attended to than in the past, for even the most successful corn growers who are feeders of stock will not, as a rule, affirm that corn in any of its forms will supply the place which roots fill in developing young stock to their best possibilities, in fattening cattle or in producing a generous flow of milk in dairy cows, mangels being preferred for the latter. There is a virtue in our succulent root crops which has shown its excellence in the superior quality of Canadian stock in no uncertain results whenever they have come into competition with the corn-fed animals across the lines in the land where "corn is king." And our people will do well to think twice

before relaxing their efforts to hold the place of supremacy they have attained and which they owe in no small degree to our magnificent root crops, which have formed an important part of the winter ration of our stock. There are very few sections of our country and very few classes of soils in which corn and roots cannot both be successfully raised if the land is properly prepared and cultivated, and we commend to the careful consideration of our readers the methods pursued by successful men as outlined in the correspondence on these subjects.

A Notable Feeding Test.

The extensive test carried on at the farm of Hon. Mr. Mulock, reported elsewhere in this issue of the FARMER'S ADVOCATE, comparing the merits of feeding steers loose (dehorned) and tied, gave such a decided result in favor of the former that it will attract widespread attention. Our representative made enquiries of other parties familiar with the experiment, and all bore testimony to the fidelity and care with which it was carried on. It throws a strong light on the non-exercise theory advanced, unwisely we have always contended, by some, particularly for dairy cows, and by others for fattening steers. A difference in gain of 100 pounds per head from November to May on the same feed is too great to allow this subject to be dropped. If other tests verify this result, the experiment will prove one of the most advantageous ever carried on in this country. We would like to hear from other feeders who, from actual experience, can give any testimony upon the points raised.

"How to Meet Low Prices."

The above subject was the title of an excellent paper given by Col. O'Brien before the East Simcoe (Ontario) Farmers' Institute recently, and published in the Orillia Packet. He entertained very little hope of a rise in prices for farm products, but advised his hearers, by increased knowledge and better methods, to increase the quality and quantity of their productions; in short, to grow two bushels of grain where only one grew before; to churn two pounds of butter where only one was obtained before; to make two pounds of beef or pork at the same cost that was required for one; to cut two tons of hay from the meadow from which only one was cut before; to take one thousand bushels of roots from an acre of land instead of five hundred. In conclusion Col. O'Brien said:

"Let me briefly sum up a few of the ways in which money may be wasted, and, on the contrary, saved; the pressure of low prices increased, and, on the contrary, relieved. In the breeding of stock it is waste to save money in the service of the male animal. It is economy and a source of profit to obtain the best suitable to our conditions. It is waste to save money by letting our stock live through the winter on the outside of a straw stack. It is economy and a source of profit to house them well and feed them well. It is waste to leave our stock to the care of the chore boy, or the man that we engage for the winter for his board. It is economy for the farmer to look after it himself, and see that the food is carefully and economically given, the stables kept properly clean, and the condition of the animals closely watched. It is waste to feed cattle upon straw and sell all one's hay and grain. It is economy and a source of profit to convert these articles into meat to sell and manure to make our fields more fertile. It is waste to buy expensive machinery and leave it exposed to the weather. It is economy to keep it under cover and in good order. It is, in short, economical and profitable to keep expenses within one's means, and avoid speculation—to convert the raw material of the crop into the finished article of beef, pork, mutton, and butter and cheese for the market, and manure for the production of still better crops, and thus to attain the desired end of meeting the pressure of low prices by economy of method and increase of production."

Restoring Fertility.

Mr. F. Marshall, of Frontenac Co., Ont., writes as follows:

"The plan of cultivation of the land as practiced by Mr. Rennie, Supt. of the O. A. C. Farm at Guelph, is entirely different from any system used here. An opinion regarding it from successful Western agriculturists would be interesting, I think, to many."

One of the most vital questions affecting a large proportion of the farmers of the older Provinces at the present time is that indicated by the heading of this article. The systems of overcropping and of selling the fertility of the farm in the shape of grain and other products, while feeding the little stock and thus making the little manure go back upon the land, is largely responsible for the condition of the average farm. This condition has been seriously aggravated in the last few years

by protracted drouths, extending over considerable areas and resulting in a total failure of the clover crop, which was and must be the principal means by which the farms can be restored to and kept in a state of fertility. The failure to secure a catch of clover has led to plowing and cropping land which should have been resting and recruiting, but has instead been losing heart and becoming more impoverished from year to year.

The question how best to manage such lands in order to restore their lost fertility, or, in other words, to furnish them with the necessary humus or vegetable matter in available condition for assimilation by the clover plant and cereals, is the question uppermost in many minds at the present time.

Mr. Rennie, Farm Superintendent at the Ontario Agricultural College, in his addresses at a number of Farmers' Institutes during the present winter has discussed this question in a very interesting way, and has related to the farmers his own experience and his methods in regard to this matter in such a manner as to arouse great interest in the minds of his hearers and those who have read of his system, which is the practice of a four years' rotation of crops, plowing only once in four years and practicing shallow cultivation as the preparation for the intervening crops. The rotation consists of two years in clover or a mixture of clover and timothy, one year in roots, corn and peas, one year in wheat or spring grain which is seeded to clover again. The clover sod is plowed down in the late summer and treated to shallow cultivation during the autumn in order to rot the sod and start weed seeds. Manure is applied and worked into the surface, and the whole land is ridged up with a double-moldboard plow into narrow drills, water furrows being run in the low places. This leaves the land in good shape for drying early in the spring, when the land is leveled and prepared for the seed by the use of the harrow and cultivator, and is planted with roots, corn and peas. The land upon which peas are grown is treated to shallow cultivation after the peas are harvested, and is sown to wheat, which is also seeded to clover. The corn and root ground is also given shallow cultivation after harvesting these crops, and is ridged up in the same narrow drills in readiness for being seeded to grain and clover in the following spring.

By this system about one half the farm is kept in grass, and when a sufficient area of the land is in good enough heart the rotation may be shortened by plowing after the first crop of clover and preparing by autumn shallow cultivation for grain in the following spring, to be reseeded with clover.

Mr. Rennie's theory and practice comes like a revelation to the great majority of farmers who have been taught to "plow deep while sluggards sleep," who have practiced summer-fallowing with its three or four plowings in one season, and have supposed that in order to succeed a little more of the subsoil must be brought up every year, but it is only in keeping with the changes which are constantly taking place in most lines of activity all around us. We are living in a new era. New ideas and methods are being generated, new theories are being advanced and put into practice, great changes are taking place in the agricultural world as well as in other walks of life. Many of the theories which were advanced by medical men a quarter of a century ago are now abandoned and held to be erroneous in the light of new discoveries. The same thing may be said of many other professions, and should not new theories and methods prevail in regard to farming?

Mr. Rennie's system, in the main, commends itself to reason and common sense. The great need of the farm is humus—nature's great restorer—which she invariably applies as a top-dressing in the form of leaves and grass, which makes a mulch, conserving moisture, and which, decaying, furnishes food for plants in the very best form possible. Sufficient barnyard manure cannot be produced on the ordinary farm to keep up its fertility, and clover is the cheapest substitute for stable manure, producing at once a valuable fertilizer in its roots and a rich food for stock in its vines, and storing up nitrogen drawn largely from the atmosphere, which is made available for the succeeding crop if it be not buried out of reach by deep plowing, which brings cold clay to the surface having little available food for the young plants when they most need it.

It would seem scarcely necessary to say to our intelligent readers that Mr. Rennie's system, excellent and commendable as a rule, may not be suitable or practicable under all circumstances, on all soils, and in all sections of the country, and that judgment must be used in regard to its adoption wholly or in part.

For instance, on clay soils which are not underdrained, and where the practice is to plow the land in ridges of 12 to 14 feet in width to facilitate surface drainage and prevent heaving out of wheat and clover by frost, a modification of Mr. Rennie's system in regard to ridging may be adopted while conserving its main features as to rotation and cultivation. Again it may not be possible in all cases to adopt in its entirety this exact system of rotation. The clover sod may not be available to commence with, and the previous management may not fit in with the new system to begin with. In such cases the best that can be done is to adopt the general principles as early as the circumstances will admit, and let one's own judgment as to whether the Rennie system is the best system to adopt in all cases.

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