THE FARMER'S ADVOCATE.

Continue Root Growing.

CORN AND THE SILO NOT ENOUGH - CULTIVATION FOR MANGELS.

It is long since farmers generally learned the value of turnips for winter feeding stock, and how to grow them, but with the march of progress roots are, perhaps, too rapidly being dropped for crops that are less expensive to grow and produce a much greater bulk of dry matter per acre. The introduction of the silo, together with the rapid expansion of the dairy industry, is, perhaps, more responsible for this change than any other cause. It is quite true that a given acreage of good corn, well cured in a silo, is more profitable than an equal area of turnips where either one or the other is grown alone, and not only that, but if dairy farming is the line followed, turnips have to be almost or nearly excluded from the ration on account of their effect on the flavor of milk and butter. Now, it is just ossible, and indeed there is great danger of running to an extreme in the direction of corn-growing, to the neglect of roots altogether. This, we believe, is a serious mistake, especially where young stock is reared, and, if persisted in, will tend in many cases to bring unjust condemnation on the silo, which, when properly used, is a great benefit to the farming business. What may be feared is that the satisfactory results obtained from the feeding of ensilage will tend to drive out other succulent foods. The result of such a course is to cause over-heating of the system of the corn-fed animals, causing them ultimately to thrive poorly, lose their hair and become scurfy and dry in the skin-an ex-ternal indication of the internal condition - as the outer skin and mucous membrane of the alimentary canal are a continuation of the same and in sympathy one with the other. This condition in ex-clusively corn-fed animals has frequently been noticed to exist for the reason that the diet was of too heating or carbonaceous character. It acts like an internal furnace, burning and parching, which condition would have been met and averted by a greater proportion of succulence in the form of

MARENGO (69069). BRED BY MR. DUTHIE. FIRST AND CHAMPION AT THE ROYAL, 1898.

roots, or a balancing of the ration by a protein sup-plement, such as oil cake, bran, peas, etc. To get a condition of this sort from feeding ensilage could sult from an abuse of a blessing through a lack of knowledge of the properties of corn, and of the importance of feeding a balanced ration. In order to get the most economic returns from ensilage, other foods should be fed with it, and among the most important are roots of one or other of the stock-feeding classes. Heavy feeding of roots is not at all necessary or advantageous, but a limited quantity of one or two pecks per day to a mature cattle beast will yield vastly greater returns than the cost of growing the roots, or of sup-plying the supplemental food in the form of grain. True, clover hay fed as a supplement to silage will promote rapid gain or milk production, but even with these the addition of a few roots daily will tend to greater profit in feeding, fattening, milking or growing cattle or sheep. Except for the milking stock, turnips are still preferred to mangels, because they are believed to yield about similar results in feeding, and are on most land more easily grown. For cows that are giving milk for human consumption, and also for winter feeding swine, mangels are much more suitable food, for the reasons that turnips impart an objectionable flavor to milk and milk products, and swine relish the mangels much more than turnips, and therefore thrive much better upon them. For these reasons we believe that every farmer who has suitable soil for roots. whether he grows corn and fills a silo annually or not, should grow a quantity of both turnips and mangels, and where young horses are raised, a patch of carrots as well. The growing of mangels does not differ materially from the raising of turnips. Land that will produce one will usually yield about equally well of the other although it is, especially in a dry season, more difficult to get a stand of mangels on a clay soil. The most suitable soil for either crop is undoubtedly a free-working loam. It is becoming generally recognized that all crops do well when following a clover sod, but general practice is not in favor of this with roots, as we all like to put our hoed crops on the poorest and weedlest land, as it gives a good opportunity to enrich it with a dress-

preferable to manure land during the autumn for mangels, we have found it very satisfactory to apply a dressing of well-rotted barnyard manure the first job after seeding is finished in spring. In fact, we usually manure the mangel and potato ground at this time, and sow the mangel seed as soon after this as the ground can be got ready. The preparation consists in plowing in the manure to a fairly good depth, and rolling and harrowing well closely after the plow, so as to keep it mellow and moist. This is very important, as mangel seed is a slow germinator in any other than a fine, moist seed-bed. If the land has been well plowed in the fall, and manured with short manure in fall or winter, best results are usually obtained by working the land in spring without plowing, especially on clay soil. This can be done with a disk or springtooth cultivator. While carrots should be sown in April, if possible, mangels should be gotten in not later than May 20th, and as much earlier as the condition of the ground and grain-seeding work will allow. Having got the manure well mixed with the soil, it should be ridged up in drills 28 to 30 inches wide, but not high. Now sow into the center of the top of the drills four pounds of seed per acre. It will hasten germination to soak the seed over night in warm water. It should then be dried by spreading it on paper in the sun until external moisture has disappeared. It is also well to roll down the drills well after sowing to hasten germination. As soon as the plants are seen along the row, start the scuffler at once. This will kill all weeds that have started to grow, and will loosen the soil around the plants, and thus promote their growth. When the plants are about 3 or 4 inches high, they should be thinned with hand hoes to from 14 to 18 inches apart. Care should be taken not to wound the plants that are to be left, nor to remove sufficient earth from their sides to allow them to fall over, as the plants will suffer materially from either of these sorts of rough usage. The best varieties are Mammoth Long Red, Mammoth Saw Log, and Yellow Globe. The last named is the best keeper, but yields somewhat lighter. The other sorts should be left further lighter. apart in the rows. Cultivation should be continued frequently as long as the scuffler does not break

ing of manure, and clean it by the cultivation that the crop requires. While it may be considered

preferable to manure land during the autumn for

Some have found it advantageous to plant mangels on the checkered-row system. The land, instead of being ridged up, is marked both ways about 26 inches apart each way. The seed is then planted with a corn planter, and singled to a plant in each place. By this system horse cultivation may be done both ways, which is a great advantage in labor and efficiency. A full crop grown by either system on well-cared for rich land should yield from twenty-five to thirty-five tons per acre.

the leaves.

Clovers as Green Manure.

The following table shows the results of Prof. Shutt's experiments in determining the manurial value of clovers. It will be noted that the clover in this test was in each case little over one year old from date of sowing :

per acre ¹⁵⁰ 1111 1117 1117 81 81 81 81 830

the charlock was exterminated, and the clovers at harvest were found to be as luxuriant on the sprayed as on the unsprayed plots. Another satisfactory feature of the spraying was its effect on thistles. These in every case were blasted, and, in the case of the plot subjected to the 30 per cent. solution, effectually made harmless. As the result of what he saw in these experiments Professor Campbell has every confidence in recommending farmers to has every confidence in recommending farmers to adopt spraying with sulphate of iron in doses of a 10 per cent. solution for the general extermination of this most troublesome weed.—Scottish Farmer.

Rape for Pasture.

For sheep and young cattle there is probably no green crop that will furnish as much good feeding pasturage or promote growth and put on flesh as rapidly as will rape. It has the property of springing up again after being eaten off, and can thus be fed over several times in a season. It is not, as a rule, considered advisable to sow it early, as it is more suitable for the late fall months, and earlysown rape is liable to turn yellow and to become infested with plant lice during the hot months in summer unless it is pastured off before it reaches that condition, and allowed to grow up again for later pasturage. Rape may be sown any time from May to August, but as a rule the best time to sow is about the end of June, or any time after the 15th of that month. This is a time when farm work is generally not pressing, and there is ample time to prepare the land well for the crop. A rich soil is not absolutely necessary for a fair crop of rape, though, of course, a stronger crop may reasonably be expected on rich than on poor or fairly fertile land. The principal thing is to get the land into good condition, so that a fine seed-bed is secured. A clover sod, or even a timothy sod, inverted and well worked on the surface until fine and friable answers the purpose very well. Failing these, a stubble field which has been manured, if not previously in a good state of fertility, may, by a good preparation of the seed-bed, serve the purpose fairly well. If the land has been plowed in the fall, it may not be necessary to re-plow in the spring, if the surface has been kept cultivated by the use of a broad-toothed cultivator to cut and destroy thistles and other weeds. This system has the merit of retaining the moisture in the soil, and if showers of rain do not come will be found to favor the early germination of the seed and growth of the plants. If the land must be plowed the roller should follow the plow the same day, and the harrow should follow the roller, if not the same day, then the next day, as the land will by this means crumble and be reduced to a fine tilth more readily and satisfactorily than if these last processes are delayed till all the field is plowed. If it is consid-ered too early to sow, or if there is not sufficient moisture in the soil to insure germination of the seed, it may be well to wait till a shower comes, when the land should be well harrowed and cultivated, if necessary, so that any weeds which have started may be killed and the seed-bed be left in fine condition.

It is generally considered preferable to ridge the land in low ridges from 26 to 30 inches apart-the same as for turnips—when the seed may be sown with a turnip drill. sowing about two poun seed per acre. By commencing to horse-hoe between the drills early weeds may be kept under and the growth of the rape hastened, and it should be horse-hoed at least three times, if possible, in order to insure a good crop. If a drill that will sow in rows on the level the proper distance apart is available, it will answer the purpose, though after-cultivation can be earlier and easier prose-cuted where the plants are grown on raised ridges. We have seen the ordinary grain drill with grass-seeding attachment used to sow rape, by placing the seed in the grass seeder, closing up part of the openings and slanting the rubber tubes into the shields of two or three of the hoes. The difficulty in this case is that the rows will be only about 21 inches apart, which leaves rather too narrow spaces between to work a horse-hoe advantageously. On land that is clean, rich and mellow, a very good crop may be grown by sowing the seed broadcast at the rate of four or five pounds per acre. It is well to sow a small proportion of Greystone turnip seed with the rape seed, as the stock will enjoy scooping these. The value of rape as fall food for sheep and young cattle is only fully appreciated by those who have had experience with it. There is no other pasture crop which will put on flesh so rapidly and keep the animals in better health. There are occasionally losses of animals fed upon it from bloating, but if care is exercised to put them on it at first only when it is dry and the animals are not very hungry they will gradually become accustomed to it, and may safely be left to graze on it till the snows of winter come. It is well to sow a piece early to be ready for the lambs when they are weaned, and to have other pieces in different fields for later feeding, so that the ram lambs may be separated from the ewe lambs; and there is nothing equal to rape for freshening the ewe flock for the breeding season, and fattening such as are to go to the butcher; while calves and other young cattle thrive on it, and are brought into excellent condition for going into winter quarters.

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FOUNDED 1866

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