



The Field.

Smothering Out the Thistle.

To the Editor of THE CANADA FARMER :

Sir—Having glanced in a former communication, under the head of "How to Exterminate the Thistle," at some of the ineffectual methods hitherto recommended and practised, permit me now to say a few words on a plan which appears to me perfectly consistent with physiological principles, and which I have found eminently successful.

The thistle will always yield most readily to the following treatment: Grow it in the shade, where it will be compelled to elongate, (but deprived of the power to elaborate) and so exhaust the root of its store. But first, let us glance at the farmer's ordinary routine of operations, and see how unerring and successful he has been, and still is, in propagating this bold, undaunted, and dangerous invader; then by reversing this routine, see if it cannot be expelled. The farmer's usual practice is to put in his winter wheat on fallow ground, and, as aforesaid, no better preparation could possibly be made for the propagation of the thistle by seed. The next misfortune follows as a rule, almost without exception; Timothy is sown with clover, or Timothy alone, and this ensures only once mowing, generally about the middle of July, just when the thistle is matured; and although the seed may not be fully ripe when cut, they ripen afterwards, in the same manner as we see in grain after being cut. In such heads, I have seen in the spring young plants issuing forth as thick as you may see young clover from a seed-head. After the mowing of this crop of Timothy, the thistle again puts forth another healthy crop of leaves, which now can luxuriate in the unobstructed rays of the sun and air, and so continue to the beginning of November, leaving the root stronger in stored-up matter than in the spring. Now, can this be altered? Yes. Sow clover for the time without Timothy, and strain a point to mow it twice, and you will assuredly succeed. Now take two thistles in the following positions, and pause a little on the extreme difference. Look first at the thistle the leaves of which, say, are six inches long, growing in unobstructed sunshine and air; see what a bright, glossy green it assumes, how fierce its prickles look, most acutely suggestive of the annoyance of treading on it with naked feet, or pulling it up with our hands.

Now turn to a feeble specimen, overwhelmed in a heavy crop of clover, with a bunch of pale and sickly-looking leaves at the top, but none at the bottom; draw them through your hand, and they will not hurt you. Light and shade make all the difference. Out of the one growing exposed, and it will soon push forth more leaves, which may be repeated perhaps ten times (as the steam-plough writer has

said), and the reason is this: as soon as the leaves put forth, they begin to organize and throw back to the root as much as it has cost for their production; but cut off the light and air, and the case is reversed. The thistle grown in the clover, has from the first been growing in the shade, and trying to keep pace with the clover to reach the light, producing thus its attenuated form, because its growth is not nearly so rapid as that of the clover, and growing in this condition, it has extracted its whole substance from the root, without making any returns, and consequently, the root has lost just so much of its substance. In the second crop, there will be the same disparity of growth between clover and thistle, only the latter will be much more feeble, so that when the second cutting takes place, the thistle is fairly subdued, but not quite destroyed. To complete the destruction, plough the lay down in the beginning of October; by this time what little power is left in the root will be exerted in the reproduction of some feeble leaves, for so long as there is active sap in the plant it must have lungs to breathe (during the growing season) or it will surely die; and by ploughing them down, no leaves are left as working agents to elaborate or digest food, to be stored in the root to produce the plant for next year. With this treatment the thistle is doomed, no matter of how long standing, or how numerous. The following has been my method of managing the clover crop. In the fall of the first year, do not feed it off after the middle of September, and if it be not strong, not at all. After the ground is frozen sufficiently hard to bear the cart or wagon, a dressing of half-rotten manure must be applied. Scatter it evenly from the wagon. This is to ensure two things—to prevent frost-lifting in the spring, and to ensure two crops; the first to be cut as soon as it is in full bloom—not a brown head must be seen. When the crop is removed, apply a dressing of plaster without loss of time. The first crop will (as a rule) be always ready from the twenty-first to the thirtieth of June; the latter, two months after. The last might be a little more matured. Now, it does not follow that the lay must be ploughed down after the first, or the second crop; but so long as it remains, it must have a slight dressing of manure in the fall for protection, and the second crop is certain. In regard to the process of making or curing the crop, the following hints may be useful. If the weather be fine, it will need but once turning. Never put it in cock; for by so doing the leaves will drop from the stalk when spread abroad again to dry. In showery weather it is much more likely to suffer than Timothy; for when once wet, after being withered, it will take twice as long to dry; consequently, a little more prudence is necessary. Never put it in a barn, or other building, but always in a stack. Twenty acres of clover will (on the average) yield thirty tons, and thirty tons make one good sized stack, twenty-eight feet long, by sixteen wide. If this stack were to be

thatched, it could not be safely done for ten days or a fortnight, by reason of its sweating; but when correctly done, clover thus secured makes the very best of hay, and always commands fifteen or twenty shillings per ton more than other hay in the English markets. "Thatching at this time of year!" the farmer may say. "I have not time." Be it so; then get some good lumber boards, fourteen feet long, and they will last a number of years with care, and are more easily removed as the stack is being consumed; and let no farmer think it a hardship to have one stack of old hay to commence the winter with. Hay put in stacks is considered in its prime at one year old. Now, suppose this clover-growing system only to effect the destruction of the thistle, then surely it is worth something; for, supposing the farmer had to consume the whole of it on his farm at the present time, I contend the hay would be worth to him at least five dollars per ton, which for the two crops, say, three tons, would bring in fifteen dollars per acre; then allowing him for cultivating the extreme sum of fourteen dollars per acre, he would clear one dollar, instead of losing ten for fallowing. There are thousands of farms that would be much benefited if this system were adopted. Sell the crop in the form of mutton, wool, beef, butter and cheese; milch cows ask for no better food, with an alternate feed of mangold and carrots. Sheep will fatten freely in winter on the same, with a few turnips. Horses (if not worked too hard) need nothing more, save a few roots of that generous yielding crop, the Belgian carrot. Then, in spring or fall, the farmer has got at hand what ought to give him as much pleasure to behold as dollar hills, namely, a comely heap of manure; with this, he must not begrudge the sum required to buy a liberal quantity of bone dust, an outlay necessary for the preparation of his root crops. Then his farm will grow, or become more fertile, instead of deserving the bad character "run out." One word more about the clover stack. Scarcely one season could pass before this hay would rival any other in the market; then no other crop would pay the farmer better. It should not be loaded up like loose straw, but cut out (with a good hay knife) in parallelograms, 3½x2 ft., each piece weighing about forty or fifty pounds, which will make a snug load by laying two in breadth. They need not have bands, but two stout ropes to unload with; while one is being deposited the other might be fixing ready to be hauled up.

The twenty acres of clover lay, ploughed down, must absolutely be followed by a root-crop; say five acres of potatoes, five acres of turnips, three of mangold, and two of carrots; and to give the jaded ground a fair chance to recuperate, crop it with the same roots the second year, only shift their position; the farmer will then have plenty of food, to feed plenty of stock during winter. As a rule, permit me to say, never manure for any grain, or potatoes; reserve