

would lose the quality, if the cows were put into fields of grass which had been recently sown with temporary varieties. The best beef and mutton sold in the summer and autumn, is fattened on the old pastures. Now, as in Canada, as well as in the Western States, there are a set of men running over the soil, taking all the rich fertility from the virgin soil, it is time some of the intelligent and wealthy of the population should endeavor to arrest this wholesale devastation, which could be done by capitalists, and, at the same time, give them a safe and more remunerating interest.

The present custom is to crop with wheat and corn, and make no attempt whatever to replace the fertility extracted, and when owners have had the first heavy yields, they rent on shares to poor men who take out all that is left worth ploughing and sowing for, and then fresh fields are sought by the tenant farmers, who often buy further west, and so on upon the same system, and thus the country is all run over; whereas, if the first owners were men of enlightened views, they would have kept half the land in grass, and have raised cattle and sheep, thereby making manure to return the land, and selling beef, mutton and wool. They would also have saved a nice field near the homestead as a dairy field, and thus, with stock raising, wool-growing and dairying combined, the run attending the growth of corn and grain alone would have been averted, and the yield would have remained as good as at first, because straw would have been converted into manure.

Walkerville, Ont.

G. G.

Live Hedges.

EDITOR CANADA FARMER.—The heavy expense of building fences, whether of rails or boards, together with the increasing scarcity of materials, will soon render it necessary for the farmers of Ontario to turn their attention to live hedges, which, if once planted and trimmed as they ought to be, will, with proper pruning, last for an indefinite length of time and be much cheaper in the end than rail or board fences. Beech or white cedar will form good fences for the purposes of windbreaks wherever the young trees can be obtained, although until they have attained a good size, they can be readily penetrated by cattle accustomed to roam through the woods. But the Hawthorn, Bark Thorn, or Thorny Locust is better. The Hawthorn can



Fig 1—Assorted Plants not cut back

be raised from the seed or haws; the others can be obtained from the nursery men. Of these, we can have nothing better than the White, or Hawthorn. I have never heard of their being girdled by mice, neither, so far as I can learn, is the Bark Thorn, a native Canadian Hawthorn, which may be found growing plentifully in some parts of the country, and haws obtained from them. The Hawthorn belongs to the Rose family, order Rosaceae, of which there are three sub-families, the Almond, the Rose, and the Pear. These are divided into several genera, and these again into different species. The Hawthorn belongs to the Pyrus sub-family, of which there are several genera. Of the species Hawthorn (*Crataegus*), Prof. Gray has enumerated six varieties, but the English Hawthorn, or White Thorn, *Crataegus Oxyacantha*, is the only one which needs to be treated of for our present purpose, as it does not sucker, whereas the Buck Thorn, (*Rhamnus Cathartica*) and the Thorny Locust are very prone to sucker; besides, the Thorny Locust is liable to be winter-killed the first year, but when it is grown, and kept well trimmed twice a year, it makes an excellent fence, a fine specimen of which may be seen on the grounds of George Williams Esq., of Owen Sound.

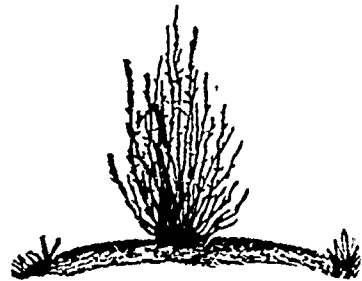


Fig. 2—End View of Young Hedge well Cultivated

Fine specimens of White Thorn fences may be seen in the Townships of Collingwood, and Egremont, in the County of Grey, and in several other Townships in Ontario. I have seen a White Thorn fence in the vicinity of Quebec, trimmed square on the sides and flat on the top, and, as might be expected, the lower branches had withered away so that, although they would turn cattle, yet flat stones set on edge or short pieces of boards had to be used to prevent pigs or poultry from getting through.

This was on the north side of the city, but along the roads leading to the westward, miles of those fences may be seen which have been allowed to grow too high, so that they are not pig-proof. The failures in raising live hedges are owing to one or more of the following causes, frequently to all of these combined:

1. Bad preparation of the soil, which is soddy or cloddy, or otherwise badly pulverized.
2. Bad selection of plants—intermixing large and small, half-dead and vigorous—resulting in inequalities and gaps.
3. Want of the constant cultivation of a broad strip of mellow soil, at least four or five feet wide on each side of the hedge row, for the first three or four years at least, without which the growth will be slow and feeble, when it should be strong and vigorous.
4. Absence of thorough underdraining along the line of the hedge, without which the plants are lifted out by frost when young, or killed by severe winters when older.
5. Neglect of properly cutting back the hedge while forming, to give it a thick or dense bottom.
6. Want of good pruning, which may be entire neglect, or a broad, flat top and thin bottom



Fig 3—Successful Hedge.

A few additional remarks will be proper on some of these points. If the soil is well prepared, the young trees may be planted not only three times as fast if badly pulverized, but they will be more certain to grow uniformly, and form a good and early hedge. Selecting and assorting plants is of great importance in preserving an even, uninterrupted and uniform barrier. The plants, before setting out, should be carefully assorted into two or three sizes, and all which are not plump, healthy, and with good roots and well-formed buds, should be laid aside and tried another season in the seed bed. Let all the large ones be set in the row together, and the same care be observed with the medium and small ones (fig. 1).

Those which are quite small should be kept in the seed bed for another year, especially if the roots are imperfect. We need scarcely add anything on the importance of cultivation to those who know that young trees as well as a row of corn, cannot flourish or make any growth without the soil is well cultivated. The difficulty with too many is that they cultivate a strip much too narrow or only two or three feet entire width, when it ought to be not less than eight or ten feet wide. Young trees send off roots on each side about as far as the height of the tree, and a young hedge, the shoots of which grow four or five feet high, will therefore have an extent of roots from tip to tip of not less than 8 or 10 feet, the whole surface above which should be kept clean and mellow (fig. 2).



Fig. 4—Hedge open at the Bottom.

If the soil is rich, the cultivation may be suspended after midsummer, to allow the new wood to ripen. Planting the hedge row within a few feet of a good tile drain, is an excellent practice, unless the subsoil has so good a natural drainage that water will not stand twenty-four hours in a post-hole on the wettest day in spring. This thorough drain not only prevents the young plants from being thrown out by frost, but contributes greatly to the hardiness of the trees in subsequent years. We have known hedges to endure the severest winters when placed over or near a tile drain, while others, similarly situated, but without drainage, were killed down to the ground. There is nothing that is more difficult than to induce novices to cut back the plants sufficiently. When planted, they should be set in two rows, or better still, in four, and should be headed down within an inch or two of the ground, which will make the new shoots spring up vigorously, while without it, the growth will be comparatively feeble.

When the plants are fairly started, they should be left to grow about two years undisturbed—in rich soils one may do so that they may become strong and obtain a good foothold in the soil. The process of bending down should then commence, and be continued twice a year, until the hedge is formed, which will be in two or three years more. The first cutting back should be within three inches of the ground; the next, three or four inches above

that; the next, four or five inches higher, and so on, increasing gradually for each successive cutting. This cutting back is commonly neglected, and the plants run up in a slender and meagre form, thin at the bottom and heavy at



Fig. 5—The same "Laid," or Prostrated by Cutting the Stem half off near the Ground.

the top. In order to keep the hedge thick below, the common error should be avoided of shearing broad and flat at the top, which leaves the bottom meagre and open. It should also be shaped to a sharp edge or peak, like fig. 3, which represents a perfect and successful hedge.

It happens fortunately that hedge rows which have been thus neglected may still, by proper management, be made into good barriers. Twelve years ago we had an orange hedge set out on a tenant farm too far off for proper superintendence. A tile drain was placed within a few feet, but the occupant could not be induced to cut the trees back sufficiently. He thought it looked like "ruin" to cut down young trees which had grown five or six feet high, to within as many inches of the ground; and, although in a few years it formed a good fence against cattle, it had numerous gaps below, and would not exclude small animals, (Fig. 1). A year ago it had grown about ten feet high when we directed it to be laid. This was done by one person taking a sharp axe and cutting the stems—which were now about an inch and a half in diameter—one-half off, as near to the ground as practicable.

When this was done, another person with a pitchfork bent the trees over in an inclined and nearly prostrate position, in an accurate line along the hedge row, (fig. 5).

If the branches of any of the trees were too broad, they were clipped or cut off with the axe. When this operation was completed, a new hedge had been formed consisting of the inclined trees, which should form an angle of about

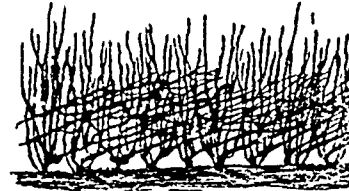


Fig. 6—The Same after One Year's Growth.

thirty degrees with the horizon. The operator should wear stout leather gloves. In the course of the season new shoots will spring up from the stubs and stems, and grow several feet high, and thus interlacing the old stems and branches, will form a new hedge, (fig. 6) of such strength that the most furious bull cannot enter it.

It is important that the cutting back be done quite early in spring, and before the buds have begun to expand. If left until later, or after growth has commenced, or when the buds are opening, a serious check will be given to the trees, and they will make but few and feeble shoots. The course just described is well adapted to a farm hedge, and has the advantage that it continues to be a good barrier even immediately after the cutting down has been performed. Another mode of renewing an old hedge is to cut the trees down within a few inches of the ground, and thus allow an entirely new growth to spring up; a year or two being thus required for the new hedge to form, it is not so well adapted to general purposes, but is well suited to door-yard boundaries, as a neater growth may be thus obtained by the removal of all the old brush. If the cutting down is done early in spring, this second growth will be strong and rapid, and the new hedge may be made in less time than by setting out young plants.

Salt and Plaster.

EDITOR CANADA FARMER:—Will you be kind enough to tell me if salt alone is good for wheat or barley, and if so, the best time to sow it, and how much to the acre? Also, is plaster good to sow alone on meadow land, of one-half clover and the other timothy? My land is a sandy loam.

J. O.

Uxbridge.

The merits of salt alone, as a fertilizer, have been variously estimated both at home and abroad. In England, Mr. Lawes of Rothamstead, after experimenting on the subject for over thirteen years, considered the results too trifling to warrant the labor and expense of application. The experience of not a few Canadian farmers, on the other hand has been quite different from that of Mr. Lawes. This can be partly accounted for by the comparative saline differences in the atmospheres of both countries; very possibly that of England is already sufficiently saturated for the purposes of vegetation. It is claimed for salt in this country that it retains moisture, prevents rust, stiffens