

Hawthorn Fences.

To the Editor of THE CANADA FARMER :

Sir,—In a former communication, I gave an account of my mode of setting quicks, or thorn plants, to form a live fence, and promised at some future time to give my experience of the cost and management of the fence while growing. I have made two importations of plants, viz., in 1862 and 1865, at an average cost of \$7.75 per thousand; this number will set thirty rods, at an average expense of 25 cents per rod, and 15 cents per rod will pay the labour of planting that amount. We may, therefore, say that 40 cents per rod will cover any outlay, except for its protection from stock. Sheep in particular, are extremely fond of the young shoots, and will entirely destroy the hedge, if they are permitted to have access to it, for the first two or three years after planting. After that time the plants will have, under ordinary circumstances, grown sufficiently large to protect themselves. After the first year the plants should be kept clean from weeds and grass, as they, if permitted to grow, will draw that sustenance from the ground that should nourish the plants. No pruning is necessary for two or three years, unless an extraordinary growth should take place, and some of the plants should exceed its fellows, in which case the larger should be cut, to correspond with those of lesser growth, the object being to keep the hedge in as uniform height as possible; and also to encourage the growth of lateral branches, which adds to the beauty and permanency of the hedge. My land is strong clay soil, and not so liable to give as large a growth as a more genial soil, (say a sandy loam,) yet mine have made such growth that the third year I have been obliged to cut them back, for the purpose above described. It is not desirable that the hedge should be allowed to exceed three and a half or four feet in height, as it is necessary to prune or cut off each year's growth, causing it to grow thicker at the bottom, by throwing new shoots and lateral branches to gain strength.

The expense of trimming may be an objection to some, under the belief that it would be a laborious operation. Such, however, is not the fact, as less time is required than the annual expense of the repairs necessary of a common rail fence, not taking into account the furnishing of new material, which is evident to all is necessary to be incurred. The cost of protecting the hedge is certainly an item of expense, but this would be necessary if no hedge were planted, and where you have an orchard, or lands which you do not intend for stock to graze, it would not be required to put an inside protection. The plan I have adopted for outside fence, is post and rail. The posts are set ten feet apart, and in line with each other, and a stake set on the opposite side of the post, using two wires to keep them to the rails; seven rails for each point, and three back from the hedge. Quite a dilapidated worm fence will furnish material for this, and when the hedge has become a fence, they will still be of use for repairs of other fences on the farm. When I have been obliged to allow stock to run, I have driven stakes seven feet from each other, and nailed on them three by one inch oak boards, fourteen feet long, and find three boards a sufficient protection for all stock, except sheep. I have been thus explicit, although many of the readers of THE FARMER have had more experience than myself, but if these communications induce some farmers to follow my example, I shall be pleased to give any further information in my power.

C. YALE.

St. Catharines, C. W.

DIGGING WELLS.—HOW TO DETERMINE WHERE WATER IS.—At a recent meeting of the American Institute Farmers' Club, a member related his experience in this matter as follows:—"An Irishman in his employment, in order to ascertain where he ought to dig to obtain water soonest, got a stone and buried it over night in the ground, next to the hardpan. In the morning he found it quite moist, but not sufficiently so to suit his fancy. Next night he tried it in another spot, and it was found very wet on the following morning. 'There,' said Patrick, 'you will find water not many feet deep, and plenty of it.' Sure enough, in a few days' digging, Patrick confirmed his prediction, notwithstanding the jeers of the workmen,—finding a vein which filled the well to overflowing, and rendered it exceedingly difficult to bail out the water so as to stone it. The philosophy of the operation seems to be that as great evaporation takes place from the surface of the earth during the night, the water rises up from the depths below to supply the loss, and accumulates in the vicinity of the stone, often making quite a puddle."

Lime.

SOILS TO WHICH LIME CAN BE EMPLOYED WITH ADVANTAGE.—All stiff clay soils nearly, and those in districts where the old red sandstone rocks prevail, are much benefited by it. It is of the greatest utility on the clays of the granite and clay-slate. Heavy doses are of extreme utility on new land or that which has been long pastured; as much as 150 to 300 bushels per acre may be applied. Peaty soils are greatly improved by lime. Good as are the effects of lime on heavy land, they are no less striking on light land. Indeed, all soils deficient in this essential element, are rendered more productive by the use of lime.

SOILS NOT BENEFITED BY LIME.—As a general rule those which contain more than 4 per cent. of lime should not have lime applied to them. Such is the opinion of Dr. Voelcker who gives the following means:—

TO ASCERTAIN THE SOILS LIKELY OR NOT LIKELY TO BE BENEFITED BY LIME.—"Put a small quantity of soil in a tumbler, and pour upon it, first a little water, and then a good deal of spirits of salts, or muriatic acid. If this addition produces a strong effervescence, there is no need of applying lime to the land: if no effervescence is produced, in all probability liming or marling will be useful. However, this simple test cannot always be depended upon, and it is much safer to have the proportion of lime determined in the soil, which at no great expense can be done by an analytical chemist."—*Ex.*

THE DANGERS OF AN ABUNDANT MANGOLD CROP.

The distinguished agriculturalist, Alderman J. J. Mechi, of Tiptree Hall, writes to a British contemporary on this subject, as follows:—"Experience has taught me the necessity for being very careful as to the safe and proper supply of mangold to my live stock, having regard to their age, sex and condition. I know that much illness and many losses have occurred this season by the too free use of mangold. The crop is so abundant in our southern and eastern counties that it has led to a too lavish and injurious use. My veterinary tells me of no end of cases which he traces to this cause. I am at present feeding horses, cattle, and sheep with it, but have to watch closely how much they can bear with safety. We never give it alone, but always with dry and varied food, especially hay or straw chaff, bran, malt combs, cake, corn, or meal. To breeding animals we never give any until some time after parturition. We have to administer it very cautiously to lambs. In the spring it is less dangerous than in autumn. I have good reason to believe that it is the large quantity of common salt in it that causes the mischief; it irritates and inflames the neck of the bladder, especially where sheep are confined. The analysis of the ashes shows that common salt (chloride of sodium) forms 24½ per cent. of the ash of the bulb, and 37½ per cent. of the ash of the leaf of the Yellow Globe, while the Long Red only contains 14 per cent. in the bulb, and 30 per cent. in the leaf. We can therefore easily understand why the latter is to be preferred for early feeding, and may be much more safely given to cows or young stock. Both Long Red and Globe contain in their ashes about 40 per cent. of potash and soda. Swede Turnips, which contain only 6½ per cent. of salt in their ash, and 14 per cent. in the leaf, may be given in almost unlimited quantity without evil result, and are much preferable for cows and breeding animals. Carrots also contain but 8 per cent. of salt. Mangolds contain more soda than either carrot or swede, and less lime. Mangold is the most nutritive root, but less of it can be safely consumed either than swede or carrot. Mangold carefully given to our farm horses does wonders for their condition—of course mixed with plenty of chaff, and their corn ground into meal; but horsemen must not be allowed to give unlimited quantities, which they are too ready to do. Sheep, deprived of exercise, suffer more from mangold than when roaming at large."

A TON OF HAY BY MEASURE.—It is a matter of considerable dispute how much hay in the mow ought to be allowed as a ton in weight. In some of the agricultural journals, figures widely apart are given as correct. Some assert that a cube of ten feet square is required, or 1,000 cubic feet; while others place it as low as six feet square and eight feet deep, or only 288 cubic feet. Now, both of these cannot be right, neither can any measure be fixed upon to hold good under all circumstances. Hay at the bottom of the mow will be more solid than at the surface, and the whole be very much affected by the quantity of grain put on top of it (if any) and the depth of the hay.

But, having occasion to sell a ton of hay in my barn, to be sure of the quantity for future reference, I measured off a space 8 feet square on one corner

of the mow, and cut down 7 feet deep, and found the hay removed weighed 2,020 lbs., thus making 448 cubic feet, a good measure for a ton of average hay; it was taken from the surface, upon which 200 dozen of good oats had been stored. The hay was twelve feet deep.

In this country, when hay is sold in the barn, it is generally calculated 392 feet to a ton, which I am confident will always fall short. On the contrary, 448 is as near the number as actual trial will give me.—*Ex.*

SOMETHING OF A PASTURE LOT.—The Valley of San Louis is a famous park. It had been settled by the Spaniards for a hundred years up to 1760, when they were compelled to fly southward by an insurrection among the Indians, whom they had overtaken in their mining operations. Since our government obtained possession, people have again flocked in, and about 24,000 white inhabitants now reside in the park. One-half of this interesting region is in Colorado. This great pasture was once the bed of an inland sea, and is surrounded by lofty mountains. Into it flows thirty-four small streams, as well as the Rio Grande. Nineteen streams in the north part flow into a lake which apparently has no outlet. Abundance of salt is found on its borders. The park has 9,400 square miles of level land—nearly one-quarter of the area of Ohio. It is, at its extreme points, 200 miles long and 75 wide. On a clear day nearly half this whole park can be seen from one of the surrounding elevations. The mountains on its borders rise from 5,000 to 7,000 feet above the surface, and from 13,000 to 15,000 above the sea. The northern portion is irrigated in the spring by high waters, and during the summer an immense quantity of hay can be cut. It is said that 1,000 mowing machines, kept busy during the season, would make scarcely an impression.

WHAT IS PROGRESSIVE AGRICULTURE?—The *New York Observer* answers this question in few words, but very comprehensively, as follows:—"Under its influence, spring up tasty and convenient dwellings, adorned with shrubs and flowers, and beautiful within with the smiles of happy wives, tidy children in the lap of thoughtful age—broad hearts and acts, as well as words of welcome. Progressive agriculture builds barns and puts gutters on them, builds stables for cattle and raises roots to feed them. It grafts wild apple trees by the meadow with pippins or greenings—it sets out new orchards and takes care of the old ones. It drains low lands, cuts down bushes, buys a mower, house-tools and waggons, keeps good fences and practices soiling. It makes hens lay, chickens live, and prevents swine from rooting up meadows. Progressive agriculture keeps on hand plenty of dry fuel and brings in the oven wood for the women. It ploughs deeply, sows plentifully, harrows evenly and prays for the blessing of heaven. Finally, it subscribes for good religious, agricultural and family journals, and pays for them in advance, advocates free schools, and always takes something besides the family to the county fair."

RAPE OR COLZA SEED CULTURE.—From a communication to the *Northern Farmer* we condense the following facts respecting the culture of the Rape plant for seed, from which a valuable oil is manufactured.

In Northern Wisconsin it has been grown as a market crop for several years, with success. The average yield of seed is estimated at sixteen bushels per acre for a series of years, over a considerable extent of territory, and the price is generally double that of wheat. It is considered easier to grow and fit for market than any other grain crop. The straw is valueless except for manure. It is also an excellent crop for wheat to follow.

The time of sowing is from the 10th to 25th of June when the time of danger from frosts has passed. Two quarts of seed are sufficient for an acre—sown broadcast and lightly harrowed in. During the first half of September it is ready to harvest, and the scythe, cradle, or mower may be used in this work. Let it lie upon the ground until dry enough to thrash, when it can be trodden out with horses or beaten with flails as fast as hauled in. When cleaned in a fanning mill it is ready for market. It will not, as some imagine, remain in the land, as the plants are too tender to endure the winter.

BONES.—An exchange says there is nothing the farmer wastes that is so valuable as bones. The phosphorus contained in them is the richest matter for farming purposes. They should never be thrown away; either break them up as fine as you can and apply to the soil, or burn and pulverize them. Treated in this way, or reduced by acid or alkalis, they are the most direct stimulants the soil can have. They rank among the superphosphates. Save the bones, and give them to your garden in some form or other.