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The Field.

Trees in Fields.

Some one has defined a weed as a plant out of place. An onion or a cabbage, however valuable in the vegetable garden, is a weed in the flower-bed. "A place for everything, and everything in its place," must be the law of both the garden and the farm.

We often and very strenuously advocate tree-planting. Time and again have we urged that in cleaning wood land, and laying out new farms, provision should be made for an abundant supply of trees, for fuel and other uses, for ornament, for shade, and for protection from cold winds. But the practice of leaving a tree here and there in fields is one we never approved or commended. Trees about the dwelling, trees environing the farm buildings, trees lining the highways, trees belting the exposed places, all this is in keeping with good farming, but trees left standing here and there in fields are huge weeds,—because out of their proper place.

No crop, except one of grass, will thrive around and under trees, and we are certain that great loss results every harvest from the presence of trees in tilled fields. Every farmer must often have noticed how spindling and unthrifty growing grain looks in close proximity to a tree. There is, in fact, a well-defined circle of barrenness around its base. And this is the case, no matter how liberally the field may have been manured. This shows that it is not the shade which does the mischief, but the myriad root fibres, which are preying upon the fertility of the soil, and robbing the crop to enrich the tree. We have read of a farmer who made a careful calculation, and found that he lost in a single season fifteen dollars on a certain crop, in consequence of two large trees that stood in the field where that crop grew. At half that rate, or even less, the loss accruing from trees on many farms must come to a considerable item. To put the thing in a nutshell,—if trees are allowed to exist in tilled fields,—they must be supported at the expense of the growing crop. Consequently, their presence is a heavy tax on the crop. In a word, however desirable, appropriate, and beautiful a tree may be in a park, on a lawn, in the wood, or by the roadside; in a field it is simply a gigantic weed, "only that and nothing more."

On farms where a system of under-drains has been established, much damage is likely to result from the roots of adjacent trees. These will travel a considerable distance in search of water, and getting into the tile-joints, and even into the tiles themselves, will expand, so as to derange and even choke up the drain. The elm and locust are particularly troublesome this way, from their peculiar formation and habit of their roots. The elm is a noble and beautiful object in a landscape. There is a peculiar gracefulness about it when growing, as it generally does, in low places, where moisture is abundant. We are disposed to say, "Woodman spare that tree,"—at any rate, when found on low ground and along creeks and river-banks.

It will doubtless be urged that it is well to have trees here and there in fields, because when laid down to grass and used for pasture, the shelter and shade are grateful to the stock. There is, it must be admitted, some force in this objection. But let us consider how much—rather how little. Granting that it is a barbarous thing to expose horses and cattle to the rays of our summer sun, without a screen, is a leafy one all that can be had? Cannot a cheap shed be constructed in some secluded corner. The cost of doing this is trivial compared with the cost of supporting a lot of trees. Properly speaking, there should not only be a shed of the kind just referred to, but it should be spacious enough, and so built, that the animals can be fed in it

with some green succulent food for their mid-day meal. It is well known that stock will undergo very long fasts in very sultry weather before they will go out into the broiling sunshine in search of food. If the whole truth must be spoken, the fact is, our whole system of pasturing is a mistake. Only in the woods left on a farm, should stock be pastured as a general rule. These should be underbrushed, all rubbish and decaying logs cleared out, and the bush seeded down with suitable varieties of grass. Here the young creatures may roam and find suitable forage. But working animals, milch cows, and fattening stock should be summered on the soiling plan; while sheep would be hurried on green forage crops. It may be said, this implies too great a revolution in our mode of farming to be reasonably hoped for. Our answer is, that however great the resolution may be, come it must, and come it will. The sooner the better.

The winter season now upon us is the time to cut down and chop up the trees left standing in the fields. In some cases there are enough on the farm to yield a considerable supply of fuel, and as this is getting scarce and dear, something may be made out of the job. More will be made out of next year's crop, and out of the crops of ensuing years. Let all the small wastes and leaks be stopped, and a by no means despicable addition will be made to the profits of the farm. "A penny saved is a penny gained," and sure we are, that a great many pennies may be saved in the manner this article indicates.

Diversified Agriculture.

It is often debated among farmers whether it is better practice to devote their attention to specialties or to carry on a system of mixed husbandry. That there are circumstances under which special products may be grown to advantage, it were idle to deny. But the tendency to rush into the cultivation of a particular crop because of a transient demand, has often been proved unwise, as also has the old plan of exclusive grain-growing. The *Western Farmer* considers a diversified agriculture "the great want of Minnesota farming," and gives the following sound arguments for the method it advocates:

1. Because under the present system the market is overstocked with some products, and the price is correspondingly low, while right here at our own doors, other farm products bring as much as in New York city, a great centre of consumption and export. Diversity of cropping tends to equalize prices.
2. Because diversity of cropping means rotation, and under a system of rotation, larger crops can be produced each year, and the fertility of the soil will last much longer than when the same crop is sown year after year.
3. Because it is safer. He who stakes all upon a single crop merely buys a ticket in a good lottery. If everything proves favorable, he gets a good thing and a large sum of money all at once. But if the crop proves a poor one, he is in a correspondingly bad condition.
4. It distributes the labor, and the cash receipts also, more equally through the year. Under a judicious system, the farmer will first sow his wheat, then follow with oats, barley, potatoes, roots, corn, beans, etc. He may get returns for wheat, barley and oats in August; for potatoes and beans, in September and October. His hay, corn and root crops will make the wool to sell in June, the pork to sell in November, the poultry to sell at the holidays, beef and mutton to sell in March or April, and butter and eggs to sell almost the year round. Thus little bills can be paid as they become due, and the long-credit system discontinued.
5. Another advantage will arise from fewer purchases at the grocery and greater variety in the home fare.

YIELD OF POTATOES.—The English Agricultural papers are just now discussing how many fold a potato can be made to produce. One writer thinks it perfectly marvelous that two pounds should produce sixty-one. This, we think, is nothing to American growers. Last year the writer cut up three potatoes of a new variety given to him, and they produced very nearly a bushel. We have little doubt but that if one set about to try, several hundred pounds of potatoes could be obtained from two pounds taken in hand early in Spring.

Destruction of Weeds.

The destruction of weeds has become comparatively easy by the use of modern improvements in machinery—one man with a horse and cultivator will kill more weeds than a dozen men with the mattock or hoe of forty years ago, or six men with the implements of twenty-five years ago. After the clumps and stones are removed, almost the whole work of thorough cultivation may be done by horse power, with machinery. These means, in the hands of a skilful workman, will drive back or render harmless the most troublesome weeds.

Legislation has done a good work towards preventing the spread of noxious weeds by putting in the shape of laws what always was a duty of owners of cattle to restrain them. I mean to prevent stock from running at large in the highway. The grass will be eaten off if stock is permitted to run at large, leaving the weeds to ripen their seeds and spread over adjoining fields. I think I never saw a man looking for the weeds to cut in the highway where his stock had eaten the grass. The streets should be mowed early, or before the seeds mature, and all mowing should be done early, both to secure the most valuable and profitable crop of hay and go far to prevent the spread of noxious weeds.

By a constant care in preventing weeds from seeding much labor may be saved in eradicating them—in fact, the first place to meet the case is, prevent seeding; in the next place, meet the weed plant as soon as it comes from the seed, or place the seed where when it springs up it can not live. In hoed crops it is hardly consistent with good farming to allow weeds to seed. The practice of hoeing once or twice will not always destroy all summer weeds. Not once or twice should they be put down, but as often as they appear, even to the first of August in potatoes and corn.

The seeding of weeds in the cultivation of small grain can hardly be avoided as they spring up and come to maturity nearly with the grain. They, like the tares of old, must be gathered with the wheat, and then disposed of.

One fruitful reason of the spread of weeds and their seeming to spring up even in the face of careful husbandry is the practice of ploughing in green manure. This should never be done by the farmer if weed seed is even expected to exist. The seeds of most weeds troublesome on the farm will last for years, and it may be for ages, not germinating except when brought near the surface. If they are ploughed in and mixed with the soil a hundred workings will hardly suffice to bring them where they may germinate and be destroyed. Frequently the ground is first seeded to weeds by ploughing in manure after slipshod cultivation, being well adapted to their finally becoming master of the situation.

I believe a theory with two propositions acted upon, and executed thoroughly, will hold weeds which propagate by seed under such control as to render them harmless. One proposition is, put all manure on sward land—if weed seed happens to be in the manure it will work down in the grass in moist weather and germinate, to be dried up and destroyed the first sunny day. Farmers need have no fear from scattering weed seed on a good green sward. The sward will become stronger and cleaner by manuring. The other proposition is, cut all the weeds in the highway, in the corners of your fences, everywhere. Also, all your meadows, before any seeds are sufficiently ripe to germinate. Follow up these two suggestions for a few years, and my word for it the cultivation of the soil will be comparatively easy.

The question whether manure is of more value as a top-dressing—or ploughed in may belong to another topic—but I am confident the ploughing in of manure is the planting of foul seed, and slack farming is the cultivation of them. Some farmers pile their manure, thinking to kill the seeds, if any are in it. No better place could be devised to keep them alive. Most of the troublesome weeds will retain their full vitality for an indefinite length of time one inch or more under ground, or in the manure.

Three advantages resulting from removing manure at once on to grass land and spreading it are saving of labor, saving of manure, and, better, the destruction of weed seed.

There are some troublesome weeds that spread from their roots, as the milk-weed, Canada thistle, quack, &c. These should be treated to a thorough cultivation. They can be effectually destroyed in spring by keeping covered a few weeks, not allowing any foliage in sight, or in the fall by bringing the roots to the top of the ground and allowing them to dry. The smallest cutting will live through the winter under ground ready to come forth in spring, but in spring if kept under ground will die. Thorough seeding is of no small importance in preventing the spread of these as well as all noxious weeds. If the soil is left in condition