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MILDEW.

By permission of the author, we make the following extract from an able and interesting Lecture on 'Botany,' delivered H. Poole, Esq., before the Pictou Literary & Scientific Society, on Wednesday evening last. The remarks will be read with great interest by our Agricultural readers:

Every Horticulturist has heard of mildew, and though it is often confounded with blight, honey dew, &c., the destructive fungi, which constitute the mildew, and the ravages they occasion, are unfortunately but too familiar to every one accustomed to either a garden or a field. Notwithstanding this, even the most eminent Horticulturists know comparatively little, either of the nature of this pest, or of its cure. One most important error exists respecting it, and this is, the belief among Gardeners and Agriculturists, that one kind of mildew will infect several kinds of plants; but this can never be the case. Each tribe of plants has a mildew peculiar to itself, which cannot, under any circumstances, affect plants of a different kind. Mildew generally appears on the leaves or stems of plants, in the form of ren or white or black spots, as a number of minute projections; as a frosty incrustation, or as a brownish powder; in every case spreading more or less rapidly according to its kind; and in its progress, withering the leaves, destroying the fruit, and finally killing the plant.

The popular reasons assigned for this pest, are various: it has been ascribed to insects, fog, and even, in our agricultural reports, to the inflammation of the oxygen gas in the air towards the end of summer, which scorches the leaves. These opinions have, however, been all proved to be erroneous. Mildew is nothing more than different kinds of fungi or parasites, attacking different kinds of plants, and varying in appearance and species according to the nature of the plants which they attack. It is the greatest enemy to the agriculturist, but the gardener also suffers from its severity. The fungi, commonly called mildew, are divided into three classes; all extremely simple in their organization, and very minute in their form.

The 1st class, or mildew composed of those fungi that live on the surface of leaves, injure a plant by preventing its respiration, but do not appear to draw any nourishment from it. One of the most common of the fungi, which attack the common cabbage, is *Cylindrosporium concentricum*; these very destructive fungi have the appearance of small white specks of frosty incrustation, which, when magnified, are found to consist of a number of small cylinders, lying end to end, or across each other. These cylinders are all filled with seed, and burst when they are ripe, scattering it in every direction; wherever it falls upon the leaf, it takes root, and thus the fungus spreads rapidly. The 2d class of fungi spring from the interior of leaves and stems, and are by far the most fatal, they generally appear in a sort of bag or case, which is supposed to be formed of the cuticle of the affected leaf. The oak apple is a familiar instance of this kind; and the Ergot of Rye is also of this class. The mildew commonly called Pepperbrand is of this kind; and when it attacks corn, it gradually consumes the substance of the grain, leaving in its stead only a dark powder, which is the seed, and has a very offensive smell. It is a vulgar error to suppose that the Barberry tree, if planted in a corn field, will, if infected by mildew, communicate the disease to the corn as the mildew which attacks the Barberry tree is quite different from any fungi which are found in corn. The 3d class attack the roots of plants, one kind attacks crocuses, and is called *Rhizoetonia crocosorum*; and in those countries where the crocus is cultivated for its saffron, as an article of commerce, it makes great ravages, and soon destroys a whole crop. The other fungus, *Periola tor-*

mentoda, is found on the potato, lucerne, &c. It turns the roots, which are naturally white, of a purplish hue. Its ravages are often attributed to grubs. All those kinds of fungi are very easily propagated from the rapidity with which they arrive at maturity, and the immense number of seeds which they produce. Most of the mildew fungi require only twenty four hours from the first springing of the plant to the ripening of the seed; and the number produced by each may be guessed, from the circumstance of one mushroom being sufficient to propagate two hundred and fifty million. The extreme minuteness of the mildew fungi renders them still more numerous. The first class, or the superficial mildew, appears to be communicated by the air, the seeds, when ripe, being carried by it from one plant to another, and establishing themselves wherever they touch. They destroy a plant by covering the surface of its leaves, and thus preventing respiration. Plants are generally most affected by superficial fungi after a long draught, when the fibres of their roots are unable to imbibe sufficient moisture from the soil, and the plant thus becomes debilitated, and affords an easy prey to the parasite which attacks it,—as a proof, Dr. Lindly mentions, that in Scotland, where there are heavy night dews, this fungus is unknown. The cure seems to be, abundant watering. The internal mildew evidently cannot be communicated by the air, since it always appears to spring from the interior of the plant, and to be at first covered with a thin skin, from which it does not burst till it is ripe. It is impossible, therefore, that this kind of mildew can be communicated externally; and yet the fact that it is contagious, is so clear as not to admit a doubt. The only manner in which it appears probable that it can reach the interior, is through the roots. The seeds when ripe, fall upon the earth, which becomes contaminated by them, and they are sucked up by the spongioles of the roots. Red plants are said to be more liable to mildew than any other. Red is indeed supposed by some always to indicate a morbid action, as it shows that the plant is unable to absorb carbonic acid gas from the atmosphere, which is necessary to its perfect health,—at all events, it is a proof of disease, when leaves, or any other parts of a plant, not naturally red, assume that color. Steeping seeds in lime water has been found to produce the best effects in curing, or at least preventing the spread of internal mildew. There appears no cure for mildew in the roots, but by cutting a deep trench round the infected plants, and cutting off all communication between them and the rest of the field.

[We would strongly recommend the following article, copied from the Central New York Farmer, to the attention of our Agricultural readers.]

THE FARMER'S RESIDENCE.

I have often expressed surprise at the want of taste exhibited by the great mass of farmers in this section of the State, in respect to their houses and the scenery surrounding them. I do not mean that their dwellings are not usually sufficiently expensive. They are often too much so, and are decidedly out of taste in this particular. But I refer to that careless, slovenly aspect, which many, not to say most farm residences (costly ones too,) exhibit in their architectural appearance, in their location, their fences, the position of their out buildings, the laying out of the grounds surrounding them in the general absence of trees and shrubbery.

I am not aware that some readers will be disposed to regard this as an unprofitable and unimportant subject. Such persons will say that if a house answers the purpose of sheltering the farmer and his family from the elements, and keeping him comfortable, it performs its office, and that its looks are of no consequence, that all this is mere pride and deserving of no consideration. Such persons are mistaken. Man's nature is such, that when his faculties have received enough cultivation to raise him

above the level of the brute, he takes delight in objects which approximate towards perfection—he prefers order to confusion—he receives more gratification in looking upon beauty than deformity—neatness presents to his eye a more pleasing picture than slovenliness. This principal or feeling of human nature is the source of much innocent enjoyment and deserves to be cultivated rather than repressed. And what more fit place for it to seek gratification, than at home? Why should not the farmer, his wife and children, rest the eye upon order, neatness and beauty, at and around their own dwelling? Would not the influence of such scenes, if allowed to exercise their natural tendency, be to spread cheerfulness and contentment over the domestic circle.

The beauties of nature, which can be so easily possessed and enjoyed around a farm house, are very generally sacrificed by the stunted plot of ground set apart for the occupation of the buildings, and for the yard. The house is placed about two rods from the street—a fence is then run from the two front corners to the street, and thus is formed the 'front yard,' as it is called—being a sort of coop, so small that you could not stand in the centre and swing a cat around you without knocking its brains out against the fence posts.—Perhaps adjacent to this, and directly under the windows of the house, is located the hog, the cowyard—or perhaps the hog pen, or corn house, or wash room, or some old shed is honoured with a location almost in front of house, and so as to entirely obstruct the prospect. Some may say, that a farmer should not turn up his nose at the exaltation of the cow yard or hog pen. With all deference to the opinions of such, I prefer to select the occasions when I will enjoy them, and not to be obliged, when sitting at my windows, to inhale their perfumes no less noxious. Not a single shade tree probably breaks the rays of the summer's sun, and scarcely a blade of grass is seen except within the limits of the afore-said coop, in front of the house. The grass plate are by the swine rooted up into sand patches, where multitudes of fleas 'trip the light fantastic toe.'

In cities and villages the price of land forbids the enjoyment of rural scenery, but in the country no necessity exists for being deprived of this luxury.

Now I suspect that the man who talks the loudest of the vanity of bestowing attention upon such trifles, would feel vastly more comfortable, snugly encased in a farm house, such as it ought to be, than in one such as it usually is. And what ought it to be? Let us see.

In the first place we will measure off at least one acre of land, as near as may be in a square, and enclose in front and at the ends with a plain, but neat light fence, painted white, and in the rear, with a high close board fence, well white washed. Next, as near as may be in the centre of this acre, we will place a small plain white cottage, built not expensively, but with perfect neatness, and taste. The house being erected, we will next contrive to have our acre well seeded down, and the whole covered with a thick sward of grass, and then we will fill the enclosure with trees, so thick as to make it almost resemble a grove, but not so near the house as to render it too damp from the shade. We must be particularly careful not to permit any barbarian to subdivide our acre by means of cross fences, and thus cut it up into pens, that look as if they were made to yard sheep in. This would utterly destroy the beauty of our residence. Let us have an open space all around the house. On the line of our rear fence we will have our carriage house and other out buildings. At one end of the park we will locate our garden, and along the other end there will be filled with such shrubbery as my wife and daughters wish to cultivate. It will never do on any occasion to turn animals loose into this yard, as they will destroy the trees and shrubbery.

As soon as the trees acquire a mode

rate growth, what a beautiful summer residence would not this constitute? How in contrast with the ordinary farm houses of the country! And yet such a residence need not be more expensive than those which are barren and desolate. Who would not prefer a house which cost only \$500, thus located, to one costing \$2000, situated as the first above described? How beautiful would be a farming country filled with such cottages? Will not some of our farmers who have occasion to build new houses, adopt the above plan? And will not some that have old ones, remove their fences and sheds, and hog pens and surround their homes with natures living green? If they should be gone during their absence from home, they would not know their residence on their return, or at least would suppose that some fairy had been busy with Aladdin's lamp.

If any of our readers have any objections to the above observations, I should be glad to hear from them through the columns of the Farmer.

From the N. Y. Spirit of the Times. IMPROVED HORSE SHOE.

BY AN OFFICER OF THE UNITED STATES ARMY.

I have been amusing myself for the last half hour in drawing a shoe that I have used for the last four years, and which I believe, would be universally adopted by those who would once use it. You will see by the drawing that the shoe is half the thickness at the heel that it is at the toe. The object to be gained is to allow the frog to come in contact with the ground. Many smiths will say this is absurd and that your horse will be lame in consequence, but it is their infernal cutting and paring that causes so much lameness. They never allow the frog to touch the ground, and the consequence is that so soon as the shoe is off, your horse is lame because the frog is so tender. Let the frog touch the ground, and I will venture to say that 'low heels,' 'narrow heels' and 'rotten frogs,' will be subjects no longer for the treatment of the veterinarian. This I know from an experience of five years. The nearer you can accommodate the shoe to the foot (not the foot to the shoe, as many are in the habit of doing) the nearer you bring the shoe to perfection. You will perceive that the parts coming to the ground are, as it were scooped, out, forming an angle as near as possible with the concave part of the horse's hoof. Thus when your horse's foot strikes the ground a curve arises under it corresponding with the hollow of the shoe (or foot) and it is impossible for him to slip. He will not ball (a great consideration in a snow country) neither will he cut himself, or "interfere" as they term it.

If you think it be of any service you are at liberty to publish my remarks, though they are not as plain as I would wish to make them. I have used this shoe in hunting, travelling, working and all other ways and it is the only shoe I ever will use. It has no corks nor toe, but I have galloped a horse around a circle of 20 feet in diameter at nearly full speed on the ice and he never slipped. The heads of the nails must project about the eight of an inch, be brought to a point, and hardened, I drove a horse from Chester, Delaware county, Pa., to Philadelphia in 1836, on the ice, shod in this way, and he never made the slightest slip—he was a horse too, that made his mile in three minutes. Another great advantage of this shoe is that the mud and gravel will not form so hard in the foot that a lazy groom's patience will be exhausted before he clears them out perfectly, as unfortunately for the poor animals, is too often the case, and nine times out of ten is the cause of gravel.

Let your hunting subscribers try it, and and they will, I am sure, be repaid for their trouble. I believe the idea is an original one—at least it is with me—for among a hundred different shoes I have in my possession, not one approaches this in form—and I am convinced they do not in usefulness.

TO PRESERVE GREEN PEAS.

To preserve green Peas for the table until Christmas, shell them and put them in boiling water, give them 2 or 3 washes only, and pour them into a cullender—when the water is completely drained off, turn them