

commodities, then the English market prices would rule the market prices here, and a duty on American produce would be a matter of trifling moment. It is needless to occupy much space with this subject, but we shall, at all times, feel it to be our duty to guard the true interests of this naturally fine country, by publishing plain unsophisticated facts.

NEGLECTANCE AND ERRORS IN AGRICULTURE.

I propose as a very proper subject for your journal, to point out some of the negligence and errors that farmers allow themselves to indulge in or commit. I have often thought, and still think, that one of the most useful periodicals that could be published, would be one for the correction of errors, called, if you please, "Erratur." Scarcely less valuable, may I not say even more valuable, would be the "Detector of Negligence;" but if both were combined, who can conceive of the value of such a work to the farmer? But enough of introductory; let us proceed to the discussion of the subject.

I believe farmers lose as much by negligence as by bad cultivation. Let me illustrate: Whenever I hear a man complain that his grounds are overrun with thistles, with ox-eye daisy, wild carrot, chess, nut grass, &c., &c., I at once say to them, there was a time, and that not long ago, when you might have prevented this evil with five minutes labour. When you first saw that villainous plant on your land, there were but one or two, or half a dozen, and you could have destroyed them with a dock extractor or hoe in a few minutes, but you neglected the opportunity. The next year their seeds were scattered over every field, and you might even then, by a few hours' exertion, have exterminated the whole family; but now their name is legion, and your small force is inadequate to their extirpation, except at the expense of at least a season's crop. This is not all. Your more careful neighbours, on whose grounds a vicious weed was never seen to grow before, are out with their weed-hooks, &c., endeavouring to destroy a noxious weed that they find springing up in all parts of their fields from the seeds blown from your fields, and wondering whence they come. Would you do justice to yourself and to all your neighbours? In all your walks over your fields carry in your hand a weed-hook, with such fixtures on the ends as will enable you to pull up a narrow leaf dock by the roots, and never allow one of these or any other noxious weed to stand one minute after your first discovery of it. Do not, as many negligent farmers do when they see a weed of this kind, pass on, saying to yourself, "I will send a hand to destroy this thing, on my return to the house." That is not the way to destroy it. You may and most likely will forget it, on your return to the house; the hand may not be able to find it: he may not destroy it effectually, if he does find it; he may not look for it, (because the land is not his, the crop to come is not his, he is sure of his month's pay at all events, he has no interest in its destruction.) In all your walks over your farm, let the staff in your hand be a well constructed weed-hook; you can walk as well and protect yourself as well with such a staff or cane as with any other. Now this is the way to rid yourself of all noxious weeds, or rather to prevent their formidable appearance. Begin at the beginning, with these pests, or with anything else. Put a new rail in that panel, in place of that rotten one yonder; do it now, don't wait till the broken rail invites some stray animal to leap into your cornfield, and in doing so, breaks half a dozen

other rails. Take a spade and drain off that pool of standing water in your wheat field yonder, and as you go along cut off that summer sprout or young shoot that is just starting from the limb of that apple tree, that favourite tree of yours, and mind, hereafter, don't let such things grow on any of your trees. Take a small spade and dig up all, every one, of those butter cups, (*Ranunculus bulbosa*), in your cow and sheep pastures, and as soon as you see a single plant of that poisonous plant hereafter, destroy it instantly. Don't you know it is one of the most deadly poisons to cattle that can be found. It does not kill, it is true, at once; but it is a slow poison, and ultimately kills any ordinary animal that eats it; besides, it poisons the milk of cows, and is supposed to be the cause of the "milk sickness of the west."

Errors in farming or agriculture, are as numerous as instances of negligence, and even as deleterious. That was a capital error of yours, sir, in supposing that because you had a thin soil with a clay substratum, you must not plow deep. Why, my dear sir, if ten years ago you had begun to plow deep, you would at this time have had a deep soil, instead of this thin skin that is made still thinner every time you scratch it. Plow deeply, as deep as you can, every time you plow, and in a few years you will have no reason to complain of short crops from drouth, or of winter killing from hard winters, nor of short crops from anything else. Don't try too much of it! Try all new things in a small way. If you had tried but one acre of that new spring wheat, and kept trying one acre till you found it to be, or not to be, what it was cracked up to be; or if you had tried but one bushel of those new potatoes, for two or three years in succession, or if you had tried a quarter of an acre of that new Spanish clover, till you had found out what it was worth—if you had done all these, you would not now be complaining of loss by experiments. Go upon, in all cases, the wise proverb of Solomon, or St. Paul, I forget which, "Try all things, and hold fast that which is good." But Solomon or St. Paul, whichever it may have been, meant that you should "try all things" in a small way, until you found them "good."

Errors in judgment are so numerous, so universal, that it is difficult to point out examples; there are so many of equal importance, that we can hardly choose which to take; but that farmer yonder who throws his stable manure out of the window of his stable, on the side of the hill, and allows it to remain there from month to month, to be washed by every rain and bleached by every day of sunshine, commits not a greater error than he who purchases manure at a distance, employs teams and hands to haul it to the farm, all at a heavy expense, and at the same time overlooks, or omits to avail himself of, the numerous sources of manure that are staring him in the face every hour of his life on his own premises. "My father killed his corn, and made good crops," says one; forgetting, as it would seem, that his father's land was new and could "stand any thing." "I have the tallest corn, and will have the greatest crop of any in these parts," says a Saratoga county farmer who had obtained some seed of the tall southern corn, in a tour last year to the south; forgetting, or not having recollected, that corn that may make a good crop in the south, will not necessarily do so in the north, until the first of October nipped all his prospects in the milk. He had not duly considered that plants have their climates as all things have their seasons.

But I must bring my discourse to a close, and will do so by a summary illustrative corollary: Two white millers, or moths, entered the gardens of two citizens in the spring: one, of course, in each. The owner of each gar-

den was present, and each saw the little creatures. One of the citizens instantly caught and killed the insect; the other allowed it to pass on, paying no attention to it. In midsummer, the garden of the first citizen was free from caterpillars; that of the other was completely denuded of foliage, with bugs and offensive insects on every shrub and plant. "Why," says the latter to the former, "how happens it that you have no caterpillars, while my garden is devoured by them?" "I killed the first miller," says the former, "you let it live, lay its 500 eggs, which in two weeks turned out 500 caterpillars, and then in their turn, in a few weeks, each 500 more, and so on till you have your millions of insects, and I have none.—*Albany Cultivator*."

GYPSUM OR PLASTER.

Gypsum is the third principal salt of lime which exerts a powerful influence on plants, and is the most valuable of all our mineral fertilizers. Much variety of opinion has been entertained respecting the manner in which it exerts its influence or produces its effect on plants; and these opinions, can scarcely be said to be harmonised, even at the present time. Davy was inclined to consider it a direct food for the plant, as it is found, to some extent, in those plants on which it exerts the most power. Chaplet referred its power to its stimulating agency on plants produced by its action when dissolved in water. Liebig ascribes its value to giving a fixed condition to the nitrogen or ammonia which is brought into the soil, and is indispensable for the nutrition of plants. Dana, to the action of lime and acid of which the gypsum is composed on the organic matter and silicates of the soil. He says: "It seems almost incredible that so minute a portion of mineral can act at all; yet how beautifully is the result explained by the principle that plants decompose first this salt; the lime, (for plaster is a sulphate of lime), then acts on geline, which is thus rendered soluble; while the acid, (the oil of vitriol or sulphuric acid,) immediately acts on silicates." It seems very probable that no single one of these suppositions will be found able to account in full for the action of plaster. That of Dr. Dana appears to approach as nearly to a solution as any of them, if we extend his term "silicates" so as to embrace those combinations formed by the union of the acid of the gypsum with the ammonia, after its separation from the lime.

If the action of plaster was due to its fixing ammonia alone, then it ought to be equally efficient at all times and places, which it certainly is not; or if it acted directly as nutriment, then its action would be as constant as that of rotted manure or compost, which farmers well know is not the case. Plaster does not act as usefully in the vicinity of the sea, as in the interior; and on heavy wet soils, is scarcely felt at all. Light sandy soils, or loamy ones, are those on which plaster acts the most sensibly; and clover, lucerne, potatoes, cab-bages, and the leguminous plants, such as peas, vetches, &c., are the vegetables on which it exerts the most powerful influence. It is much valued as a dressing for wheat, not so much, perhaps, for its direct action on that plant, although that is not trifling, as for its effect on the growth of the clover and other grass seeds, usually, in wheat countries, sown with this crop. So marked is the influence it exerts in this respect, that plaster, clover and vetch are always associated in the mind of the most successful wheat growers; and its use is the most extensive in the best wheat growing districts of our country. In the minds of many, a senseless prejudice has existed against plaster, on the ground that it the more speedily exhausts the soil, and that the heavy crops at first obtained were the price of ruined farms. It is doubtless true that the man who uses plaster on his farm, who takes from his soils all he can get, and returns nothing to them, will soon find his soils worthless enough. He who intends to farm it in this way, should avoid plaster; but let any farmer alternate wheat and clover; husband and apply his manures; feed off his clover in his fields, or to his stock in their stalls; let him separate his grass seed, in seeding, or his plaster in dressing, and his farm will never run down. Such men need not fear plaster.—*Geoffrey's British Essay on Agriculture*.