

set of bottom herbage; and like the rest of the monomaniacal agriculturalists, they think there is but one grass worth preservation, and that is timothy, and as grazing that grass close does not suit it, every other consideration has to be thrown on one side. For the sake of one mowing the waste of the rest of the herbage takes place, and here want follows waste as surely as it does elsewhere.

Waste not, want not! but it is waste everywhere, not only the waste of manure in every shape, but half the seasons are wasted, for where grain is grown without seeding to grass, the months of August, September and October are wasted, or I should say, the land is wasted during those months, and July should be mentioned too, for wheat is often harvested at the beginning of July, when a good renovating crop might be sown. Instead, the weeds grow up, go to seed, and look disgracefully untidy; and in the very months in which in England and Scotland millions of acres of roots grow and enrich the soil by the manure made from feeding them off with sheep, the land runs to waste, and want of manure is felt everywhere after the first flush of plant food in the virgin soil has been exhausted by continued cropping. A great deal of waste drudgery is self-imposed; for there is in America a kind of superstitious faith that every one ought to be compelled to use their muscles and strength of body, and that it is the duty of every one to labor hard with their bodily power, as if it was a sin to use the mind to save the body, and also as if no one has a right to pass through the world and waste the work that is in him.—*George Gables.*

Are Our Farms Deteriorating?

This question has come up to my mind many times during the last few years as I visit the various sections of the country, and converse with the farmers from the different parts of our broad land. Sometimes I fear it is true; for it is a fact, humiliating though it may be, that some of our principal crops are becoming more uncertain each year. Especially is this the case with the corn crop, which was once our most certain crop, but now, unless the land is in a remarkable degree adapted to the crop, failure is as likely to follow as success, in the style in which we cultivate our lands. The yield per acre of corn diminishes in a somewhat alarming degree, notwithstanding our other crops are as good and often better than formerly. It may be owing to the change in the seasons, for let the meteorologists say what they please, we do have colder nights and more varied weather during the growing season. This is abundantly proved by the oat crop, which is far better than it was ten or fifteen years ago. While talking with an old farmer recently, one who has grown grey in the ranks, a man of ability and good judgment, he remarked that "in some respects this country is worn out, and a young man had better seek another to begin life in," for, said he, "our seasons are becoming more capricious every year, and although we raise bigger crops of hay, and perhaps of oats, still, as a rule, good crops cannot be depended upon from many of our farms, do what we will. All land is held at the price of good land, whether it is good or bad. If one man sells his farm at \$50 per acre, his neighbor must have as much or he will not sell; consequently many have bought farms who cannot make them pay, and are discouraged, when if they could have bought good land, they would have made good farmers."

In my opinion, our lands as a general rule are in a great measure exhausted of some of the necessary elements required to produce good grain, corn especially, and how to replace them must be our study for some time to come. I fear our farm-yards do not furnish a quantity of manure sufficient to any more than maintain our present losses. What the past has taken away must be replaced in some other manner. Not only do our yards fail to give us enough manure to improve our farms as they ought to be, but it is every year becoming more unprofitable to feed any stock except that from which we can realize a daily revenue, or in other words, milch cows or mutton sheep. Many farms are not adapted to the dairy business, and more farmers cannot, from various causes, keep dairies. Sheep, owing to the limited demand for early lambs, and low price of wool, will not be kept by any great proportion of our farmers, so after all the problem remains unsolved, unless we can make it profitable to purchase artificial manures, and grow a larger amount of forage on the same area. Then by feeding this to stock even at a loss some years, we get our profits from increased grain crops and general improvement of our lands, thereby enabling us to keep a greater

number of cattle and sheep without any additional cost for land. This seems to be the best plan, if not the only one practicable for us to pursue. The only difficulty is the question where we shall obtain the capital necessary to carry out this series of improvements. Indeed the more we meditate upon this all-important subject, the more insurmountable appear the obstacles in our path. In the end we must have better prices for our produce, or cheaper capital to work with, or else see our lands slowly but surely fail, and be powerless to prevent it.—*Cor. C. Gent.*

The Young Man who "Sticks to it."

There is a great deal of regret expressed in speeches, letters to agricultural papers, and in editorials by kind-hearted, well intentioned editors that the boys are leaving the farms. There is no doubt that many young men have realized the fact that farm life is no "harder" than city life. There are many who have been wise enough to return to the farm after testing the realities of life in a city. But the boys who leave the farm for the city or the village follow the example of older men. The number of well-to-do farmers who have realized beautiful homes, reached middle age and have sold their farms, bought village or city lots, and settled on them with a view to "taking things easier," is not a small one. These men do so with the same, or similar, motives with which young men leave the farms, and they are as often disappointed in the results.

We know farmers, both young and old, who have abandoned profitable and beautiful farm homesteads, removed to the village, invested their capital in trade, got pretty thoroughly "cleaned out" in a business in which they had no practical experience, and have bought back their homesteads at an advanced price, running in debt to get possession of them, and working hard and contentedly to pay again for what they once possessed. Some of these men have said to us, within the past two months, "A farmer is a fool who sells his farm thinking to have an easier and happier time in a village or city."

The effect of such reaction in the case of these examples up to those who stick to the farm is exceedingly wholesome. It renders them more content. They have not wasted their substance in "pulling up stakes" and removing from "the old landmarks." They have been steadily accumulating as farmers and gathering about their homesteads all the modern appliances for the conservation of comfort and content. The young (or old) farmer who "sticks to it" is sure to win what city-made money rarely purchases— independence, happiness and a sense of security which is the result of well-doing.—*Moore's Rural New Yorker.*

The Work of Insects

The following calculations show the immense value of tiny insects and insignificant looking worms:

Great Britain pays annually \$1,000,000 for dried bodies of the insect known as the cochineal; while another, peculiar to India—gum chellal, or rather its production—is scarcely less valuable. More than 1,500,000 human beings derive their sole support from the culture and manufacture of the fibres spun by the silk worm, of which the annual circulating medium is about \$200,000,000. In England alone, to say nothing of the other parts of Europe, \$500,000 are spent every year in the purchase of foreign honey, while the value of that which is native is not mentioned; and this does not include the 10,000 pounds of wax imported annually. Besides, there are the nut galls, used in making ink; the cantharides or Spanish fly, used in medicine. In fact, nearly every insect known contributes in some way to swell commercial profits. Even the dreaded Colorado potato bug may become useful, as will be seen from the following note, which we clip from an exchange: "An order just received from a chemical manufactory firm of Indianapolis for one thousand pounds of potato bugs may be classed as one of the curiosities of commerce. It has been discovered that these insects possess qualities which make a good substitute for the Spanish fly, and there is a prospect that, from being regarded as an unmitigated pest, they may become a source of actual profit."

Oil-cloth is ruined by the application of lye-soap, as the lye eats the cloth, and after being washed it should be wiped perfectly dry, or the dampness will soon rot it. If laid down where the sun will shine on it much, it will be apt to stick fast to the floor, unless paper is laid under it.

In Sweden gardening forms a part of the educational system. Upwards of 2,000 schools have gardens for planting attached to them, and the teachers of elementary schools are obliged to learn gardening. There is a garden attached to the Higher Bungher School at Utrecht, in which botanical specimens are planted, arranged, and classified by the pupils. To some extent, gardens have been apportioned to schoolboys in this country, but rather as a means of recreation than of study. The Duke of Northumberland's School, at Alhwick, affords an instance in point. But it is worthy of much wider adoption in country districts.

WORKING HARD.—Working hard is not always working to the best advantage. A man may work very hard chopping cordwood with a dull axe, and pumping water with a pump that "sucks air," but he is not working with economy. A man gets pay, or ought to get it, not for working, but for what he accomplishes. This is as true of the farmer or hired men, though we do not feel its force so fully in the one case as in the other. We do not like paying a man for carrying one pail of water when he might just as well carry two, or for ploughing or harrowing with one horse when he might just as well drive three. But farmers themselves often do things equally wasteful of time and labor. Do they never take a load to the town and come back empty, and then go empty to the town to bring a load back, and thus lose half their own time and that of the team.

AMOUNT OF WATER CONTAINED IN DIFFERENT PARTS OF A PLANT.—M. Galeznoff gave the result of his researches in calculating the amount of water contained in the different parts of a plant. By dividing a trunk into a number of pieces from the base upwards, he found invariably that the quantity of water increases from the base towards the summit. Of the four species studied by him, he found *Pinus sylvestris* contained most moisture in the trunk, and *Acer* the least. *Betula* and *Populus tremula*, were intermediate. In *Pinus* the bark is drier than the wood, and in *Acer* more moist. In *Betula* it is drier in the winter and spring, and more watery in summer and autumn. The contrary takes place in the case of the poplar. In the branches the same law holds good, but their bases are drier than the portion of the trunk from which they take their rise; and the petioles are more watery than the leaves. In the flowers, the perianth, the filaments and the styles contain more water than the anthers.—*Journal of Botany.*

ENGLISH SPARROWS NOT A NUISANCE.—It has been reported in some quarters that the English sparrows imported into the Eastern cities were proving a by no means desirable accession to our bird population. They are accused of pugnacity and mischievousness, to such an extent as to disgust the better-mannered native-birds who were said to desert the neighborhood of the sparrows. The *German Town Telegraph* says this is all rubbish: "We were among the first to have the European sparrow upon our premises, and they are now quite numerous; but up to the present time they have nothing to do with driving other birds away. The robins were more numerous the past season than usual. So were the catbirds; the common sparrows were here as usual; the kingbirds ditto; the wrens ditto; the wood robins ditto. We have no bluebirds—a very shy, silent bird, because the wrens drive them away; they throw their eggs out of their nests and take possession, and then build up the entrance so completely that nothing larger than a wren can enter. The winter sparrows from the north come here as usual, and they and the European sparrows get along harmoniously, taking their feed together."

THE MOSQUITO.—In its perfect or winged state it is about as annoying a creature as can be, but then it must be remembered that the traveller is but a casual intruder in the natural domain of the mosquito, and must expect the consequences of his intrusion. Devouring travellers is not the normal occupation of the mosquito, for hundreds of successive generations may live and die, and not one of them ever see a human being. Their real object is a beneficent one. In their larval state they live in the water, and feed upon the tiny particles of decaying matter that are too small to be appreciated by the larger aquatic beings, and, by devouring them, purify the water and convert death into life. Even in our ponds at home, we are much indebted to the gnat larva for saving us from miasma; while the vast armies of mosquito larva that swarm along the edges of tropical lakes and feed upon the decaying substances that fall from the herbage of the banks, purify at the same time the water and the atmosphere, and enable human beings to breathe with safety the air in which without their aid no animal higher than a reptile could have existed.—*"Insects Abroad," by the Rev. J. G. Wood.*