

house to house, especially in the most thickly inhabited districts, and do much to prevent the overcrowding of tenement-houses, to secure proper ventilation and to enforce cleanliness in them, as well as personally on the part of their tenants. To have the streets properly swept, cleaned and kept free of foul odors, are also included among their duties. Being men educated to rely mainly on chemicals and drugs for obtaining desired results, they use large quantities of disinfectants to destroy the injurious and often deadly gases and malarious exhalations from the garbage and general debris incident to the crowding of large masses of people in cities. These disinfectants are highly useful in their way, but sanitary officers seem not to have observed another means at their command which, while it greatly assists in promoting the general good health of the inhabitants, would add to their comfort, and at the same time do much toward the adornment of the city. We allude to the planting of city streets with shade trees.

It is well known that trees absorb carbonic acid gas and give off oxygen, the first as injurious as the last is indispensable to animal life. Men and animals, on the contrary, absorb oxygen and give out large quantities of carbonic acid gas. When, therefore, we consider the immense amount of this gas given off from the lungs of the inhabitants—human and brute—of a large city, and the immense amount produced by the combustion of the fuel used in dwellings, factories and workshops, we may form some idea of the enormous vitiation of the atmosphere thus produced. Those who have given attention to the subject estimate that it requires more than two acres of forest to purify the air vitiated by every three inhabitants. According to this, a city of 60,000 inhabitants would require 40,000 acres of vegetation to take up the carbonic acid and other deleterious gases given off by its people. If it were not for the action of the wind in removing the atmosphere poisoned by the emanations from the city and replacing it with a purer atmosphere from the surrounding country, the city would soon become uninhabitable; but the winds have not such full sweep over cities, owing to the height of the buildings and other causes, as to thoroughly cleanse the atmosphere brooding over them. Hence the necessity of encouraging the growth of as much vegetation as possible within the limits of the cities themselves. So nearly exact is this estimate that we may regard it as demonstrating the necessity of large parks and squares in cities. But, through the growth of the city, land becomes too valuable to provide a sufficient area of parks and squares for such purposes. Resort must, therefore, be had to the streets themselves; and hence all streets not devoted to com-

mercial purposes should be planted with continuous rows of trees on either side. Paris now has so large a number of parks, and its streets and boulevards are so profusely planted with trees that, according to very reasonable estimates, the death rate has been thereby reduced from 1 in 34, as it formerly was, to 1 in 39 as it now is.

Added to the beneficial effects produced by these trees in the absorption of deleterious gases, is the shading of gutters and roadways, which materially retards and prevents the action of the sun in producing noxious fermentation. The roots of the trees also take up large quantities of such matters as are washed by the rains into the interstices of the pavements. In addition to these sanitary effects are the comforts derived from the shade of sidewalks. It is the glare of the sun upon these, when unprotected, which, during the tropical heat of summer, gives such an oven-like atmosphere to our streets and causes so many cases of exhaustion from heat and the often fatal sun-stroke. Last, though not least, the beauty of our cities would be greatly enhanced by this tree-planting; and walking in the streets during the hotter parts of the day would be made less wearying than it now is. In none of the cities of the United States has proper consideration been given by the authorities to this simple and not costly means of adding to the general comfort and health. Tompkins Square, in New York City, is an instance on the other hand of downright ignorance and stupidity in this respect. Situated in the most densely populated portion of the city; surrounded by tenements filled to repletion with artisans whose labors are carried on in their own rooms or in the close and confined atmosphere of neighboring factories, it has been almost entirely denuded of trees, and its surface covered with a cement pavement, which, on a hot summer's day, evolves a degree of heat only surpassed by the furnace spoken of in the Book of Daniel.

Another instance, in the same city, of ignorance among men from whom we would least expect it, is exhibited in regard to the sunken lots known as the Harlem Flats, extending from the Third avenue to the East River, and from 92nd street to 105th street. A large portion of these flats had been filled with garbage, ashes and other debris of the city, to a depth of several feet, the abominable and poisonous odors and gases arising from which proved unbearable. To put a stop to this filling, legal action by the Courts and the Board of Health was invoked, and the result was the application of injunctions and disinfectants, though with small effect. Planting this poisoned ground with sunflowers would have prevented the nuisance, while the crop of seeds would have more than repaid the

expense. The medical men who directed the disinfectant application were undoubtedly of high standing in their profession, but they knew little of botanical science or the practice of horticulture. Such instances show conclusively that Botany and Horticulture have their use in the every day needs of mankind and are not, the one merely a dry science, and the other an elegant amusement.

THE *Colonial Farmer*, of Fredericton, after giving a full account of the recent Annual Meeting of the Halifax County Agricultural Society, offers the following observations:—

We are glad to perceive that so great an interest is taken in Agricultural affairs in the sister Province; that gentlemen holding high positions in society and in the Civil Service do not consider it beneath their dignity to give their sympathy, and when necessary, more substantial aid, towards elevating and advancing this great interest. The improvement of the Stock of the country appears to be the great aim at present, and is indeed of the highest consideration, as without it, very little successful farming can be accomplished. The position which Prince Edward Island sustains to-day as a grain producing and Stock raising country, is largely due to the wise provision made by the Government for a Stock Farm, and although there are no direct returns or profits arising from it, still it has been the means of increasing the wealth of the country generally. The farmers of that favored Island have been able to secure at very little cost, the very best breeds of cattle, and the neighboring Provinces have looked towards it frequently as the source from which to replenish their Stock. The effect of all this is, that while Prince Edward Island proudly boasts of possessing better Stock than any of the other Maritime Provinces, many of the farmers are wealthy enough to enjoy some of the elegancies and luxuries of life, and thus return in the shape of taxes to the Treasury, a sum equal to that expended by the Government for the purchase of Stock, and in sustaining a Breeding Farm.

Mr. J. J. H. Gregory of Marblehead, Mass., has his annual advertisement in our columns. He was the original introducer of some of the best vegetables now found on every table. He comes this season with a new squash, and a number of tempting specialities, some of which are finely illustrated from engravings taken from photographs. The fact that so many of his varieties of seeds are of his own growing, is a golden fact for farmers and gardeners.