

in the above quotation. The first requisite to secure the best effect is that the control of the grounds should be in the hands of persons of taste, who will secure a good plan and make and enforce rules that will determine the character of the whole cemetery. Then, with proper business management, the income will pay all expenses and provide for the future care of the grounds.

I will make a few suggestions about the plan. A gravel drive should lead to within one hundred and fifty or two hundred feet of every point in the cemetery, and there should be as few drives as possible and comply with this condition. Every drive should have an easy grade, and its location should be determined by the shape of the land, the existing trees, the desirable views and the condition named above. A curved drive is much more pleasing than a straight one, but there should be no unnecessary curve. The walks leading from the drive to the family lots should be left in grass and form part of a continuous lawn. A pleasing vista can be preserved by leading one of these grass walks through it, making the lots fronting on this walk deep in proportion to the width, and requiring all monuments that are erected to be placed at the rear of the lots. Along each side of the drive and in places that are specially interesting for any reason, as for commanding extensive views, the lots should be made much larger than in other places. Such an arrangement will add to the artistic effect of the whole cemetery and increase the value of even the most humble lot.

The planting should be done in accordance with the principles of landscape gardening, which should be carefully studied before the work is commenced. Do not plant rows of trees along each side of the avenue nor arrange them like an orchard. Although the boundaries of lots should never be indicated by the planting, it is advisable to separate the monuments more or less by trees and shrubs. In some cemeteries the planting of shrubs is prohibited on account of their occupying so much ground space. Such a rule greatly diminishes the attractiveness of cemetery grounds, where we should have every variety of beautiful form and color which the vegetable world produces. It is not

an uncommon thing for a man to buy a lot and erect thereon a monument costing ten times as much as the lot itself. If he had reduced the cost of the monument one-tenth and doubled the size of his lot the effect would have been much better and there would have been plenty of room for shrubs. Furthermore, the larger the area and the greater the quantity of foliage in proportion to the number of the graves, the less injurious will burial grounds be to the healthfulness of the neighborhood. If properly treated they may indeed become beneficial.

There should be but one family monument on each lot, and this number can be reduced with advantage in most cases. A favorite tree or a large boulder will last longer and be more ornamental than the average monument. T. H. Hoskins aptly observes: "The danger now seems to be in vast and unwise expenditure for the adornment of cemetery lots and the erection of costly monuments. Alongside of a poor and meanly equipped school-house in my neighborhood is a cemetery with not less than a dozen lots, where from \$500 to \$2,000 have been expended in this way. Yet, would not the memory of the loved and lost 'smell sweet and flourish in the dust' far longer if a large part of this money had been bestowed for the endowment of some permanently beneficent institution? If my heirs want to spend \$1,000 in a memorial I hope they will give it to a free school or a free library and let the sweet grass over my grave grow, unvexed by costly marble or granite." Any one advocating the simple park-like treatment of cemeteries would be guilty of doing injustice did he not acknowledge the wonderful skill of the late Adolph Strauch, who did more than any other man to improve public taste with regard to this subject.

LAWNS AND LAWN SEEDS.

The State Agricultural College has just sent out a bulletin written by Prof. W. J. Beal giving the results of some careful analyses of lawn seed mixtures, and notes in making and caring for lawns. We extract as follows from the bulletin:

Many of the farmers of Michigan, as well as large numbers of people who own, each one or

more, lots in or near town, are seeking to improve their homes. In embellishing a place, we agree that nothing gives more satisfaction for the outlay than a well established and well kept plat of grass called a *lawn*.

Owing to the difficulty of learning to recognize the seeds, the purchaser is usually at the mercy of the dealer, whose interest it is to enshroud in mystery the whole subject of grasses for the lawn.

Most of the leading seedsmen of our country are advertising extensively and appear to be selling large quantities of 'mixtures' of lawn grass seeds for which there is quite a variety of attractive names.

The writer has frequently examined these mixtures and has watched the success of several of them in various portions of the Northern States.

The professor then says he secured through other parties, samples of the approved lawn seed mixtures advertised by the most reliable seedsmen, and with the greatest care assorted the various species of seeds found in each, and he gives tables showing what he found. Aside from Kentucky blue grass and Rhode Island bent or red top, he found more seeds and grasses that are not suitable for the purpose than valuable varieties. He says the lawn about the State Capitol and the best pieces of lawn at the Agricultural College, are composed of June grass, red top and a sprinkling of white clover; and the best turf for sodding purposes as found in pastures or other places is composed of the same species.

We quote again :

With the writer's experience, having tested for some years over two hundred kinds of grasses and clovers, both native and foreign, for Michigan and places with similar climates, he would sow about two bushels of seeds (in the chaff) of June grass, *Poa pratensis* L., and two bushels of some small bent grass, known as Rhode Island Bent, Brown Bent, or Creeping Bent or as Red Top. The latter grasses vary much and are usually much mixed, as they were in all the samples above examined.

A few ounces of white clover may be added, if the owner prefers, but it is by no means very important. Each one of these two or three kinds of plants will appear to cover the ground all over, so it will look uniform.

To the farmer who is accustomed to sow coarse seeds for a meadow or pasture the above quantity of seeds appears to be enormous. But the aim is to secure many very fine stalks instead of a few large coarse ones.

If a little sweet vernal and a little perennial rye grass are used a careful observer, at certain seasons of the year, will see that the lawn looks "patchy." Especially in early spring, or in very dry weather, some of these and others often recommended, will grow faster than the rest and assume different shades of green. For a lawn *never* use any timothy, orchard grass, tall oat grass, red clover, meadow fescue or other large grass or

clover, but only the finest perennial grasses or clovers. Sow the seeds in September or in March or April, without any 'sprinkling' of oats or wheat and as soon as the grasses get up a little and the straggling weeds get up still higher, mow them, and keep mowing every week or two all summer.

Avoid purchasing mixtures advertised in seed catalogues, as it will be much cheaper and safer to buy each sort separately, and only one or two or three sorts are desirable. The rarer grasses are mostly imported, and up to the present time, have been found to possess very low vitality; besides, bad foreign weeds are very commonly mixed with these grass seeds. There are good reasons, then, for buying common sorts, and if possible, those raised and cleaned in a careful manner.

In closing the bulletin, the professor urges that deep, thorough preparation and fine pulverization of the surface are essential to the production of a good lawn, and that no mixture of seed should be purchased no matter how highly recommended by seedsmen; but June grass and red-top in almost any proportions, or each alone, if sowed in abundance and given the entire use of soil that is well fitted, must secure to owner a good turf.

HORTICULTURE A SCIENCE—AN EXTRACT.

PROF. BAILEY, BEFORE INGHAM CO. HORT. SOCIETY.

* * * * We must correct ourselves if we entertain the notion that horticulture has to do simply with securing the best and largest products. It inquires about the means as well as after the ends. It seeks for the why as well as the how. The why is science; the how is practice. Ever since Thomas Andrew Knight began to demand why grafts live and vary and why insects fertilize flowers, horticulture has been a science; and although that science is nearly a century old, it is still mainly known as an art. Why are trees smaller and rounder, fruits better and colors intenser as we go northward? Why do plants germinate quicker and at lower temperatures in cold countries? Why is the apple hardy and the fig tender? Why do latent characters sometimes appear in offspring? Why are small plants most fertile? Why do plants become variegated and why is variegation contagious? Why does the Kittatinny blackberry rust when many others do not? Why does the apple succeed as a root-graft when the pear does not? Why are some flowers white and others yellow on the same