

anything like a just estimate of the money value of a manure can be given.

In a highly concentrated, well prepared super-phosphate, I have already noticed that soluble phosphate has a somewhat higher commercial value than in an ordinary sample. Concentration or dilution of all the more fertilising constituents similarly affects the commercial value of other manures. It is, therefore, evidently unfair to take as a standard the price at which ammonia, phosphate &c., can be purchased in Peruvian guano, in calculating the money value of night-soil, sewage, and other bulky fertilisers.

A very striking example, showing how much bulky and, comparatively speaking, valueless materials reduce the money value, is presented to us in farm-yard manure. One ton of fresh yard manure of fair average quality, I find, contains :

6½ lb. of soluble phosphate of lime, worth, at 3d. per lb.,	1 7½
8½ lb. of insoluble phosphate of lime, worth, at 1d. per lb.,	0 8½
15½ lb. of potash, worth, at 3d. per lb.,	3 1½
15 lb. of ammonia, worth, at 6d. per lb.,	7 6
Total,	12 11½

Whilst thus the calculated value of farm-yard manure is nearly 13s. per ton, its real commercial value is about 5s. per ton.

Again, before certain measures could be obtained that are now specially prepared to suit particular soils, or particular crops, enterprising and intelligent manufacturers have frequently incurred heavy expenses in trying all kinds of fertilising mixtures before they succeeded in ascertaining the states of combination and the relative proportions in which these should be combined in order to produce the best practical results. It is, therefore, but fair that those who profit by these researches should repay the manufacturer for the time, skill, and expense which he has bestowed upon the production of such special manures. In estimating the money value of such fertilisers this ought to be taken into consideration, and allowance be made for more than mere market price of the several uncombined ingredients.

Perhaps it may be suggested that all these observations only tend to show the inability of the chemist to give a reliable estimate of the money value of a manure. I openly confess concurrence in this sentiment if the name of "chemist" is applied to a mere human analysing and calculating machine, or even to a purely theoretical man of science; but strongly repudiate it if it indiscriminately refers to every chemist.

The errors committed by purely theoretical men, or the carelessness and ignorance of others who call themselves agricultural chemists, show a capacity in individuals; but they do not prove that men who, without presumption, may be claimed to the office of an agricultural chemist, are

not in a position to render most useful services to the farmer by informing him whether manures sent for examination are cheap, dear, or moderate, at the prices at which they are offered for sale. Unquestionably, a considerable amount of commercial and agricultural knowledge, as well as judgement and the fixed determination neither to favour producer or consumer, are quite as essential qualifications in an agricultural chemist as analytical skill; but those agricultural chemists who possess the somewhat rare gift of uniting sound and scientific knowledge with good sense and acquaintance with practical matters assuredly are, or ought to be, in the very best position properly to estimate the agricultural and money value of manures.—*Journal of Royal Agricultural Society of England.*

Horticultural.

Flower Garden and Pleasure Grounds.

A friend remarked to us after the issue of our last number, that it was very discouraging to be told that ten per cent. on the original cost should be the estimated cost of maintaining a place after its completion. He thought if that were generally known, it would prevent many from entering on country life. "My place," said he, "cost me about \$20,000, and I should be sorry to believe that I had to spend \$2,000 annually to maintain it in decent order." As our friend's place embraces but five acres, we were surprised at the cost, but found he included his house in the sum named. Allusion is again made to the subject as other parties may have misunderstood our remarks. We referred simply to the garden and its embellishments. Those few places in the Union that have had \$20,000 spent on pure gardening, will not find \$2,000 too high an estimate for their annual maintenance, and never ought to find in that fact any discouragement.

From remarks made by other friends, we learn that the observations offered on this subject have attracted considerable attention. We are pleased that they have done so. Gardening suffers no greater injury from any source than from parties who go ignorantly into its pursuit; and we can do both it and the citizen proposing to go into the country, no greater favor than to show plainly what gardening costs, as well as indicate the various ways in which pleasure may be derived from it.

Planting of spring bulbs, tulips, hyacinths, crocus, snowdrops, fritillarias, lilies, etc., and the transplanting of shrubs and division of herbaceous plants, will occupy chief attention in October. All herbaceous plants are much better for being protected through winter by a covering of dry leaves, on which a little soil is thrown to keep the leaves from blowing away. Half-