The following observations on the use of gypsum we copy from "Foote's Prize Essay" on Manures:—

1. It has been observed that plaster acts with increased efficiency when applied in connection with manures, or recently manured lands. The solution of the phenomenon, by our theory, is easy and satisfactory. The ammonia, which would otherwise escape from the decomposing manure into the atmosphere, is siezed upon by the plaster, detained in the soil, and wholly converted to the use of the growing crop.

2. It has been observed that plaster acts with greater power on soils which have been recently stirred, than on those which have lain for a long time unmoved. Solution. By stirring the soil its porosity is increased; consequently it absorbs more freely the dews that fall upon it—from which the plaster separates, and hoards up in the soil, the rich deposits of the atmosphere. In proof of the etxent to which the atmosphere is charged with fertilizing matters, which the rains and dews are constantly depositing upon the surface of the earth, we will here introduce the substance of a statement made to the American editor of Liebig, by Mr. E Tufts, of Charlestown.

"Eight years since, about three quarters of an acre of land, situated on one side of a lane, and on a declivity, were broken up." About the same time, the proprietor of a field on the opposite side of the lane, and above the land of Mr. T., commenced gardening on a large scale, and formed an 'immense bed' of compost in the lane. This heap was made up of animal and vegetable matters, and from receiving constant additions, is continually undergoing fermentation, and the gases and vapours emanating from it are always perceptible. Four years ago Mr. T. observed, that, in some inexplicable way, his land had become so fertile as to induce him to dispense with the use of manure; he has not since used it, and is now 'fully persuaded that its fertility is owing to certain vapours arising from the heap, and then descending on his land. None of the soluble matters of the heap are carried to Mr. T.'s field, no manure has been applied, and its fertility continues unimpaired.' —*Appendix to Liebig, p.* 366.

3. Plaster has been observed to produce but slight effects upon old, dry, and hide-bound meadows. Says Liebig (p. 87), "Water is absolutely necessary to effect the decomposition of the gypsum, and also to assist in the absorption of the sulphate of ammonia by the plants; hence it happens that, the influence of gypsum is not observeable on dry fields and meadows.' To which it may be added, that, but a small quantity of putrescent matter existing in such cases, the exhalations are inconsiderable; and what is deposited from the atmosphere by the dews cannot be absorbed by the soil, in consequence of its compact, impenetrable surface. On old, and even dry *pasture* lands, the effect of plaster is much greater, there being ever present on their surface a portion of manure to serve as a basis for its action.

4. It has been universally observed, that the most striking effect of plaster is on the clover crop. "Red clover contains double the quantity of nitrogen that common hay does." *Gray*, p. 158.

Guano.—Within a short time, experiments have been made in England with guano found in the Hebrides, and other Scottish islands, and also with the same substance found on the coast of Africa. We have seen no statement showing the comparative value of the Scottish; but in the late English papers we notice the results of various analyses, from which it appears that Peruvian guano contains from 86 to 88 parts in 100 of available matter, and the African 76—or, compared one with the other, as 7 to 8. Comparing cost and value, when delivered in England, however, the African is said to be 23 per cent cheaper than the Peruvian. In England, guano is estimated five times stronger than night-soil, four times stronger than dove-cote manure, "a deadly enemy to the wire-worm and fly, and a preventive of mildew and red rust." We doubt whether experiments in this country have supported this high estimate of its value. Attention is now being directed to the islands in the gulf of St. Lawrence, the coasts of Labrador and Newfoundland, &c., for the substance.—*Albany Cultivator.*

Agricultural College.—Measures are to be taken for the immediate establishment of the agricultural College in Wiltshire, for which purpose a public meeting of the friends and supporters of the proposed plan has been called for the 22d inst. Earl Bathurst has consented to preside.

Lime and Salt.—I tried this mixture on two acres of old grass land, having mixed them in the proportions recommended by Mr. Cuthbert Johnson. A heap was made, and the lime and salt were laid in alternate beds, then mixed up together, and well covered over with soil and sods. After three months this was applied to the meadow in question; it was in a state resembling mortar, and was with difficulty spread; after it became dry, it was beat to pieces, and spread and brush harrowed. In many parts of the field, the grass appeared as if it was scorched. It did not grow luxuriantly, and the crop was the worst I ever had—in some parts not worth cutting.—*Correspondent Gard. Chron.*

Analysis of Soils.—the following is a method of analysing soils for ordinary agricultural purposes:—Weigh a convenient quantity of the earth to be analysed say 1000 grains, dried in the open air; dry the same before a fire on paper, so as not to scorch the paper; re-weigh, and the difference will be the organic matter. Pour a convenient quantity of muriatic acid on the remainder; stir, and when settled, pour it off, and add oxalate of ammonia: the precipitate will be lime. Mix the remainder with water, and stir it well; when a little settled, pour off the turbid mixture, and the suspended contents are argillaceous, and the deposite siliceous.—*Correspondent Gard. Chron.*

Cucumber and Melon Bugs.—The ravages of the yellow striped bug that attacks cucumber and melon vines, may be effectually prevented by sifting charcoal dust over the plants. There is something in this very offensive to the bug.—*American Farmer.*

Love of Flowers.—A love of flowers is one of the earliest of our tastes, and certainly one of the most innocent. The cultivation of flowers, while it forms an elegant amusement, is a most healthy and invigorating pursuit. Unlike hunting, fishing, shooting, or similar rural amusements, it inflicts no suffering on any of the animal creation, and merely aids nature in her efforts to make the world beautiful to the eye, as the fruits are pleasant to the taste. The flower garden, while it agreeably occupies the time, does not impose a heavy tax upon the pocket, and there are very few flowers but what may be cultivated to as great perfection in the garden of the peasant as of the peer. It is a taste, too, which is well adapted to the female character, and affords much rational amusement to the recluse.—*Manual of Gardening.*

Charcoal and Guano.—Mr. Teschemacher, in "Hovey's Horticultural Magazine," says, "By mixing one-fortieth part of charcoal with a compost made of two parts loam and one of old manure, and carefully and intimately mixing the whole, and then applying it to greenhouse plants in the pot, and watering with water in which guano had been mixed, at the rate of one ounce to ten gallons, this treatment produced the most astonishing effects, not only in the growth but general health of the plants.