

This soil produces from fifty to sixty bushels of Indian corn every year—wheat does not thrive on it.

Specimen from Somerset county—

Vegetable matter,	42.60
Silica, (sand,)	53.20
Iron, as per oxide,	.61
Alumina, (pure clay,)	2.70
Iron and alumina, as phosphates,	.13
Lime,	.21
Magnesia,	.20
Potash and soda,	.15

Sulphuric acid and chlorine not estimated quantitatively, but sufficient.

This soil produces from thirty to forty bushels of corn every year—no wheat.

### LIGHT SANDY SOILS.

These soils are characterized by their coarse, gritty texture, their porosity, their white color and their barrenness. Sometimes the sand in them is brownish from the presence of iron. Their greatest defect is mechanical. They are deficient in clay and iron, and their sand is too coarse to absorb much, if anything, from the atmosphere.

Their chemical defects are lime, magnesia, the phosphates; these substances, though present, are not in a condition to be used by plants.

They should be treated with compost, made of vegetable matter of any kind, such as scrapings from the woods, the *clearings* out of ditches, &c., with any of varieties of lime containing magnesia. Gypsum should always be sown on these lands when not in cultivation, and as large a crop of grass as possible suffered to grow on them, unmolested by cattle. When this decays, it will dissolve much of the mineral matter in the soil, that otherwise would not be taken up by plants. The compost manure, recommended above, supplying lime and magnesia, would act in the same manner. If the magnesian lime be applied by itself, not more than twenty bushels per acre should be applied at one time.

This should be done in the fall or winter preceding the crop to be tilled.

It should be spread on the surface, for in these porous soils the rain will carry down the lime into the soil, distributing it very equally through it. As those soils cannot absorb ammonia well, that form of guano containing the largest amount of it should be preferred for them. When bone dust is applied, it should be done immediately before the crop is planted. Gypsum should always be used on these lands.

One of the best means for the improvement of this class of soils is by crops of *peas*, and the common *lady pea* is better for this purpose than all others. The ground intended for their use, should be ploughed up in April or May, and the peas harrowed in about the middle of the latter month, or first of June, by means of a light