exist in the gas house lime at the time of its application, sufficient to produce deleterious effects, has not been as yet determined. There is the same poverty of *exact* knowledge in relation to this, as unfortunately there is in regard to other substances used as manures. The specimen marked No. 2, containing nearly one per cent. of free sulphur, was applied on growing wheat, at the rate of about one hundred bushels to the acre, by a gentleman whose statement can be implicitly relied on, with very good results; not the slightest injury was experienced. We thus have *one fact*, and that is, that gas house lime containing (.90,) equal to nine-tenths of one per cent. of sulphur, when used as a top-dressing to wheat in the winter, is beneficial.

The injurious effects which have resulted from its application, and its known properties, admonish us, however, when ignorant of its exact composition, *not to apply it to a growing crop*, nor *to a soil that is to be immediately cultivated;* when containing a large proportion of sulphur, to apply it to a soil abounding in *weeds*—which are pests to cultivation—and to meadows, some time before seeding them, to destroy all grasses likely to injure the hay crop. We can also safely say that, when applied to a soil deficient in sulphates and lime, the combined effects of gypsum and common air-slaked oyster shell lime, will be experienced. When its composition is unknown it should be applied to the surface one season before the crop is planted.

From the above analyses, the great difference in the various lime used *indiscriminately* for agricultural purposes can be seen at a glance—some containing forty per cent. of magnesia, and some none—some containing near ten per cent. of gypsum, and some none—some having twice as much lime as others, and no magnesia. If every soil was exactly alike, could it be possible that each of these limes would be equally beneficial? If the oyster shell lime should be the best application, see what a loss would be incurred by the application of Schuylkill lime, No. 1, containing not half as much lime. If, on the other hand, this lime, (the Schuylkill,) should be the best—as it is for some soils—consider the loss in applying oyster shell lime, and thus withholding from them forty per cent. of magnesia.

But when we remember that many soils contain an abundance of magnesia, and some scarcely any, the loss in applying to the first a lime containing more than fifty per cent. of what is already present in sufficient abundance, is greatly increased. The same remark is equally true in relation to the soil containing a mere trace of magnesia, when we apply to it lime also containing none. In each case our expense receives no remuneration; our efforts at improvement are useless; we labor in vain. That many soils have an abundance of magnesia, and some a mere trace, is an unquestionable fact. That the limes used for agricultural purposes