

wonderful. As to the ashes, all alkalies hasten the decomposition of the organic and inorganic elements of the soil and cause to be prepared more rapidly the food of plants, but they are not to be relied upon as permanent fertilizers, like animal and vegetable manures. They hasten the preparation of plant food and expose it to be more readily consumed by vegetation; therefore, unless adequate returns are made to the soil in other manures, the land in time becomes exhausted of its nutritive elements in proportion as the crops are increased.

Common salt, (chloride of sodium) entirely different in its elements from plaster, (the sulphate of lime) has long been known, when applied at the rate of not more than five bushels to the acre, to lands not dressed with salt by the spray or mist from salt water, or containing sufficient salt to increase the productiveness of a soil deficient in salt, and also to be destructive to insects. Experiments with salt are contradictory—but harmonize in one respect. When salt is applied in the interior beyond the influence of the salt spray or clouds of mist from the salt water, often carried by strong winds many miles inland, it is always beneficial—so it is with plaster. Its application on seaboard is not so beneficial as farther inland. During the great easterly storm, in 1816, the glass in the easterly windows of houses became encrusted over with salt twenty miles from the ocean.

Neither horse manure or muck used alone, are advisable as a top dressing. They lay too loose upon the surface, dry up, lose their strength and do not settle down soon enough about the grass roots—but the best method is to compost the horse and cow manure, when fresh, before any of their ammonia has escaped in the process of composition, and take one part horse manure, two parts peat and one part loam, thus the productive value of each will be increased—and spread just before the grass starts so that the manure may soon be protected by the grass from evaporation—therefore, the above experiment does not settle the true value of animal manures compared with the other substances used, but only their relative value as used in the manner they were.

If the excrements of the cow and horse are applied as a top dressing, in a green state, there must be necessarily a great waste of their strength by evaporation, and if not used, until they have rotted down to a fine condition, without being composted, suited to the purpose of top dressing, there must

have been a waste by the escape of those gases during decomposition, which gases, if saved by composition, the nitric acid, &c., would have made a treble bulk equally good, which constitute the value and strength of these manures,—therefore, these manures should either be composted when green and strongest, or be immediately applied to and mixed up with the soil, before any of their strength is lost, during fermentation and decomposition. The reason why old well-worked compost equals pure manure in its effects, is that nitric acid is accumulated according to its age and work, particularly in hot weather. The manure alone can neither absorb or fix the ammonia or nitric acid—more material is necessary to do it.

When our agricultural colleges get fairly into operation, we may hope to see agriculture become a more exact science. The application of science to practical agriculture, should be made with judgment and great discrimination, as great as the astute lawyer practices in applying the principles and science to the case before the court. Some farmers complain of the agricultural papers and scientific treatises on agriculture, because they cannot apply and practice upon every principle advanced; being unable to do this, they decry book farming, science and colleges,—when every man of common sense and observation, with a decent common school education, should know enough to know that in a whole volume of the soundest principles and maxims of the law, there may not be more than four lines applicable to the case in hand. The farmer in New England or Georgia, who expects that everything which he reads in a journal, or in an elaborate work on practical agriculture, must apply to his own case and circumstances, or be useless, is as unwise and indiscriminate as a lawyer would be who should attempt to enlighten the court about his case, by taking his whole library into court and reading it continuously, volume after volume, to settle the question, what is due notice to an endorser of a promissory note. The lawyer does not decry book learning, or the science of the law or denounce the schools, because every principle laid down in his thousands of volumes, does not apply to the case in hand or his general practice, but he studies his books and seeks to find such principles as do apply, and failing in this, he adopts general principles and reasons out from them the desired result. The physician does not burn his library and decry medical science, colleges, and the learning of