

confess their ignorance and call for light. As to the third class, the remedy is within their reach. They have the privilege equally with the amateur farmers, of contributing to agricultural journals. Then, practical farmers, at once avail yourselves of this privilege. Give us the result of your experience, and correct the evils that you complain of; if you have made any discoveries or improvements in preserving and applying manures, in raising crops, in rearing and managing stock, write out a statement and send it to Mr. Allen, or some other editor, and I doubt not, it will be thankfully received and published. Would that be book farming? All theory and no practice? To all such objectors, I say, write yourselves, and make the papers what they should be—practical journals of agriculture. No system that is not based on practical results, will ever be regarded as valuable by intelligent men. The observation and experience of many intelligent practical farmers who have hitherto remained silent, would be a valuable addition to our agricultural literature, and of incalculable benefit to their co-laborers. To such farmers, I say, do not withhold your contributions because you are not skilled in grammar. It is not fine writing that we want, but facts and ideas conveyed in an intelligible manner. Farmers should learn, that, by an interchange of experience and opinion through the medium of agricultural journals, they can confer mutual benefits upon each other. They should also remember that these journals are published for the dissemination of a knowledge of the best modes of making, preserving, and applying, manures to different crops; the best and cheapest methods of preparing the soil; the best and most economical manner and time of seeding and harvesting particular crops; the best kinds of crops for a particular soil or climate; and the best breeds, and the best manner of feeding or managing any particular kind of stock, &c. &c.

No man can fail to perceive that these results can be best attained by educated, intelligent and practical farmers, aided by the almost daily discoveries, by means of science. G. P. Lewis.

Huntingdon, L. I., October, 1848.  
—*Am. Ag. Journal.*

The last substance, ever present in the atmosphere in considerable proportions, and which bears a very important relation to the prosperity of the farmer's crop, is the aqueous vapour, without whose unvaried presence no commonly cultivated plant could flourish, and few exist at all. Providence, therefore, has ordained that this should be ever ready to meet the demands of vegetable life, and that its quantity should vary with the temperature, increase with the warmth when its presence is most needed by the plant, and diminish as the air becomes cooler; thus, at a temperature of 50°, supposing it to have a free communication with water, the atmosphere contains about 1-75th of its weight of vapour; but when its temperature

is increased to 100°, then its proportion of water is increased to 1-12 of its weight. And this is the more important, and the more beautiful arrangement in the economy of nature, as Davy well observed, because in very intense heats, and when the soil is dry, the life of plants is mainly if not entirely preserved by this absorbent power of their leaves and the earth in which they grow: and, happily, this watery vapour is most abundant in the atmosphere when it is most needed for the purposes of life.

The cultivator will derive many advantages from a careful investigation of the support yielded by the vapour of the atmosphere to his plants, he will perceive that its unvaried presence affords an additional reason why the air should be allowed to circulate freely through the well-pulverized and loosened soil to the roots of all growing crops; and let him carefully avoid the very common, yet erroneous conclusion, that the atmosphere is ever *dry*; that it no longer contains watery vapour; for he will find that the fact is the very opposite to the common vulgar conclusion. The chemist's laborious investigations have clearly demonstrated that, though the watery vapour varies in amount, yet it is never absent from the atmosphere, and that if it is unable to penetrate to the roots of the farmer's corn, the fault is not in the wise economy of nature, but in the inattention of the cultivator, who is either too inattentive to see the advantages which he might thus freely derive, or too indolent to loosen the case-hardened soil, which prevents the entrance of the requisite supply of moisture. One of the causes of the unproductiveness of the cold clayey adhesive soils, as Davy well remarked, is that the seed sown upon them becomes coated with matter not readily permeable by the air.

The farmer can convince himself of these facts by the simplest experiment. Let him merely use his rake or his hoe on a portion of a bed of wheat, or turnips, or lettuces, or any other kind of crop, and let him in the driest weather merely keep this portion of soil loose by this gentle stirring, and he will find that instead of prejudicing his crop by *letting out the moisture*, as is often ignorantly supposed, something is evidently let into the soil: for the portion thus tilled will be soon visibly increased in luxuriance by the mere manual labour thus bestowed; and in this experiment, which I have often tried, I am supposing that both the portions of the ground are equally free from weeds; that in every other respect the treatment of both the tilled and undisturbed portions of the experimental plot is exactly the same.

To a very considerable extent some of the best of the English farmers have long found out these facts, and have acted upon the discovery. The horse hoe of the east and south of England in the driest days of summer may be seen at work in the large sandy turnip fields of Norfolk and Suffolk, with great regularity, not for the mere destruction of weeds, for these are not the abounding tenants of such skillful farmers' lands, but for the