On the use of Lime and Ashes.

We are intimately acquainted with the writer of the following interesting letter, to the Editor of the *Ohio Cultivator*. Mr. Ladd belongs to the Society of Friends, and may with much propriety be termed a junior farmer, his age not exceeding twenty-four years. He is, however, one of the most intelligent and enterprising young farmers, that it has ever been our lot to meet with. He has received a most liberal education, and in fact has been solely educated, with a view of fitting him to manage his fathers estate, in a manner that would appear in keeping with the genius of the nineteenth century. Canada is as capable of affording talented young farmers as any other country, and we trust that the junior readers of the *Cultivator*, will take a leaf from Mr. Ladd's book, and make the attempt to write for their own Magazine, so that its Editor would not have to be dependent upon the American writers for suitable matter for his paper. There are hundreds who are capable of writing for the press.—The only thing required is a simple statement of facts and experiments clothed in common sense language—and if any brushing up or improvement in style be required—we shall feel a pleasure in performing that part of the task:—

FRIEND M. B. BATEHAM.—I observe in No. 1, of Vol. 3, of the *Ohio Cultivator*, some inquiries signed "J. W. B." Harrison Co., and "A young Farmer," Medina Co., which I shall endeavour to answer—This I undertake with some diffidence, being aware of my incompetency to instruct to any great extent, yet, being in possession of some facts both from my own experience and that of others in the use of lime and ashes, I feel willing to communicate them.

1st. In regard to applying lime in the winter season—I may state that I spread some 2500 or 3000 bushels in the depth of last winter on clover and wheat, the effect on the clover, fully came up to my most sanguine expectations, yielding more than double the amount of hay and pasture, that I obtained off the same number of acres of the same quality of land without the application of lime or other manure. I could not see much difference in the wheat; there was a very strong growth of grass, however, which leads me to the conclusion that those who wish to see immediate effects had better apply lime to grass than to wheat—and consequently that I. W. B. had better spread his now, on the ground that he designs for wheat the coming season; this will produce a luxuriant crop of grass, which should be plowed under about the 1st. of 6 mo. (June, and stirred just before sowing in the fall. This is the mode adopted by the best farmer with whom I am acquainted, and I think can be philosophically proven to be the best—The opinion of some of your last year's correspondents to the contrary notwithstanding.

The substance used by us designated common lime, is the air slacked or carbonate of lime, Gypsum or Plaster Paris being the sulphate of lime. The organic constituents of all plants are hydrogen, oxygen carbon and nitrogen, the two first form water, and two, second carbonic acid, the first and last ammonia. Water, carbonic acid ammonia, then, or their elements, compose the organic parts of all plants—Lime, according to Dana, acts as a neutralizer, a decomposer, and a converter—neutralizes acid geine, decomposes metalic substances, and converts insoluble or solid vegetable fibre into soluble vegetable food. Now add the acid geine, &c., contained in a luxuriant crop of clover or other grass, to the metalic substances of the soil, and we have a vast field for the action of this great agent, hence the policy of excluding the vegetable matter from the action of the air, &c., and turning it up in connection with the lime just at the time you want these, properties made available food for the young plant.

2d In regard to the worth of leached ashes according to chemical analysis, that part which is soluble in water contains but three ingredients; sulphuric acid, muriatic acid, and potash—which are not contained in the insoluable. Some chemists, therefore, conclude that where soap boilers have used lime with the ashes to strenghten the ley, that leached are worth nearly as much as unleached ashes.

3d Will lime destroy the Hessian fly? I think not, except some few which might possibly come in contact with it in a caustic state. It may however be of service in enabling the plant by a vigorous effort in the spring to overcome the depredations committed in the fall.

Ashes are recommended by chemists, both theoretically and practically, as an excellent manure