

Agricultural.

Value of Ashes Leached and Unleached.

We commend to our readers the following article on this much neglected subject, from a correspondent of the *Michigan Farmer*.

The results of the experiments of a correspondent with ashes and bone dust, might reasonably be expected, under the circumstances they were made. The bone dust and ashes were applied to the potato crop grown on the land that had borne the same kind of crop the previous year. Potash being a large mineral constituent of the potato, a comparatively small percentage of phosphoric acid composing its ash, unleached ashes containing a large amount of potash, were rightly applied to a soil that had been largely deprived of its available potash by the previous potato crop. Hence this experiment does not prove (as the writer would seem to infer) the *invariable* superiority of ashes over the bone phosphate as a mineral fertilizer. The important fact should not be lost sight of in the cultivation of soil, that our crops are composed of various organic and inorganic constituents, the percentage of which greatly varies in different crops; hence, under certain conditions of soil, a fertilizer that would greatly benefit one kind of crop would be comparatively inert when applied to some other crop. Phosphoric acid is a large mineral element of most of the cereals, composing about 50 per cent. of the ashes of wheat, and is almost invariably the smallest inorganic element of even our best wheat soils. Lands, consequently, that had for years been largely devoted to the growing of wheat and other cereals, would necessarily first be deprived of the phosphates; under such circumstances, bone dust, containing about fifty per cent. of phosphoric acid, would prove far more efficacious in restoring this special exhaustion than ashes, in which there is a very small percentage of the phosphates. The potash in ashes being readily soluble, unleached ashes can always be more profitably applied than bone dust direct to *summer crops* that require either of those fertilizers, the latter needing more time to become soluble by the combined action of moisture and the acids in the soil. The beneficial effects of bone dust are, for this reason, more marked the second or third year on soil deficient of phosphates than at an earlier period. A super-phosphate is decidedly preferable to bone dust for a summer crop, a part of the phosphoric acid in the bones having become soluble by the action of the phosphoric acid.

A mixture of equal parts of bone dust and ashes, adding one part of plaster to two of bone dust, with water sufficient to merely moisten the mass, I have repeatedly used with most satisfactory results. It has proved with me to be an admirable fertilizer in cultivating the grape. This mixture should not be used until the fermentation has ceased, which is usually the case after eight or ten days. The high price of bone dust has heretofore prevented its being much used as a special fertilizer for the wheat crop in places remote from the seaboard towns. Should all the neglected bones be carefully collected, and rightly prepared for agricultural uses, the present high price of the article might be considerably reduced. On soils capable of growing good crops of wheat, no great expense need be incurred in keeping up the needed supply of phosphates. An intelligent and very successful farmer in Western New York, was for years in the habit of applying to his wheat crop about 100 pounds of bone dust per acre; the governing principle, as he remarked, in its application, was to supply an amount equal to at least two years' consumption of any plants needing such nutriment. This small amount of bone dust, doubtless, was amply sufficient to supply the wants of this well-cultivated farm. It is well always to bear in mind, in the cultivation of our lands, that it is far more expensive to improve the condition of an impoverished farm than to keep up its early productiveness by proper and timely appliances. I have no desire to under-rate the value of ashes, as mineral fertilizers, having used them with most satisfactory results in cultivating our sandy loams.

On the farm I lately owned, large quantities of leached ashes, obtained from an ashery in Marshfield, were annually used, different fields on this farm receiving a dressing of 100 bushels per acre at intervals of five and six years. When thus applied, each acre received over 1,500 pounds of lime,

nearly 400 of the phosphates, also an appreciable quantity of potash, magnesia and gypsum, as the analysis shows. The beneficial effects of leached ashes were so marked in the increased crops of wheat and clover, that the present owner of this farm still continues their annual use. This ashery being about one mile from the farm, the ashes never costing more than ten cents per load, a valuable mineral fertilizer was obtained at a comparatively small expense.

Although the percentage of the phosphates in leached ashes is small in comparison with bone-dust (exceeding, however, that in unleached), still, when applied in large quantities, as these can safely and profitably be applied, when near at hand, they afford a fair supply of phosphates to the soil at a cheaper rate than in the purchase of bone dust at present prices. Ashes having been deprived of most of their soluble parts in leaching, a summer crop would be but slightly benefited by their immediate application. Their action is less energetic than bone dust, which is sooner decomposed in the soil. For a summer crop requiring an active fertilizer, the bone and ash mixture would be decidedly preferable.

W. R. SCHUYLER, Marshal.

Sheep as Enrichers.

I wish through your columns to state to you my experience in fertilizing grass-land with sheep. I stated my treatment of a piece of "worn out" grass-field, as we term it, in a convention of the Board of Agriculture in Lewiston, in the year 1869, which was noticed by many of the papers throughout the country; and having received a great many letters for farther information concerning the same, I will give you the history of the treatment and condition of the field up to the present date.

In 1865 I had a field of ten acres that had been mowed ten years in succession without a particle of dressing put upon it; the grass had completely died out, and nothing was to be seen but white-weed and yellow-weed, or butter-cup and ox-eyed daisy. The soil was a clayey loam wanting a little to the south and west, was in the smoothest possible condition, without stump or stone, and bordering upon a stream of water. In the spring of the same year I put upon this field of ten acres forty one-year-old sheep without lambs. These sheep kept everything down as smooth as a barn-floor. The next year I put on the same number and kept them on until time to come to the barn. They were not taken from the field at any time during the season, neither did they have any grain of any kind, but were in splendid condition. They were grade Merinoes.

In the spring of 1867, I noticed that the field looked green the last of April and the first of May, so much so that in consulting with my neighbors I was induced to keep the sheep off from it and let it come up to grass for the scythe. The field in the meantime had been sowed over with a light dressing of plaster, about one bushel to the acre, and a small quantity of grass-seed, timothy and red-top. Nothing else has been done to the field in any shape up to the present time.

Now for the result. The first year after taking the sheep off I had the greatest yield of grass that I ever had from any of my fields under other treatment, and of the best quality, a mixture of timothy, red-top, white clover and some grass that I cannot name. Hardly a head of white-weed or yellow-weed was seen on the field.

But what is most remarkable to me and my neighbors is, that the field has continued to produce bountifully up to the present time, which is eight years since the sheep were taken off; and to-day (August 2) the field is tented thick with bunches of the very best hay, averaging over one ton to the acre. I have since sold the field to one of my friends, and I asked him yesterday if he expected to get another crop from the field without dressing it again. His reply was, "Yes, I expect to get several more yet."

Now, Mr. Editor, what I wish to impress upon the minds of the farmers is this, that instead of running wild about raising fast horses and getting up cheese factories, it is better for them to give more attention to sheep husbandry; for if we put upon our impoverished lands in fact costs nothing to keep them through the summer season, as they more than pay for their cost in reclaiming these lands.

Let each farmer decide for himself what breed is best for him to keep. It depends upon our nearest market. The grade Merino will do better on short pastures than any breed that I am acquainted with.

The hay crop with us is mostly secured in good condition and is of good quality. Apples are almost a total failure. Other crops are looking well. —H.G.A., in *Germantown Telegraph*.

The Clawson and Diehl Wheats Compared.

"A. H. B.," a correspondent of the *Owosso Press*, publishes the following comparison of the Clawson and Diehl wheats, made by him:—

I have been requested to make out and hand to you for publication the following statement of the comparative merits of two varieties of winter wheats, the Diehl and the Clawson. The amount tested, though small, is sufficiently large to form a basis for more extensive computation. The samples were taken from a field on the farm of Mr. J. V. D. Wyckoff, of Woodhull, and consisted of 25 heads of each variety, grown upon soil as nearly identical as could be found.

The Diehl yielded 847 kernels, weighing exactly one ounce. Of the total number 60 were shrunken and worthless.

The yield of the Clawson was 857 kernels, the exact weight of which was one ounce and two and a half drams. The kernels of the Clawson were all plump except nine.

The comparative yield by weight is thus shown to be exactly 21½ per cent. in favor of the latter variety. The result by measurement in a glass graduate was about the same. The heads were not selected, but were plucked by Mr. Wyckoff with a view to representing the average yield of each sort as nearly as possible.

The seed of the Clawson variety was presented to Mr. Wyckoff by Carso Crane, of Phelps, N. Y. The amount sown was about three bushels. It is a white wheat of a shade similar to the Diehl. The straw is said to be about six inches longer than that of the Diehl at maturity, but is not quite so firm. It is also free from rust, while the Diehl, immediately adjoining, is not.

[We have had ample opportunity of comparing the productiveness of the Diehl and Seneca varieties of wheat, and it is our opinion that a like result to that of the crop at Woodhull would be obtained throughout the country wherever a similar experiment was made.—Ed. F. A.]

Value of Covered Manure.

When rough sheds have been built to cover the manure heap, the crops fertilized by this pile have been increased in productiveness sufficient to pay for the shed-covering the first year. We have never seen any exact figures of the proportionate value of covered and uncovered manures, that we remember, until the following, which we find by Lord Kincaid, a Scotch land-owner and farmer. They present the best statement possible, we think, of the advantages of the plan:—

Four acres of good soil were measured; two of them were manured with ordinary barn-yard manure, and two with an equal quantity of manure from the covered shed. The whole was planted with potatoes. The products of each acre were as follows:—

Potatoes treated with barnyard manure—
One acre produced 272 bushels.
One acre produced 292 bushels.
Potatoes manured from the covered sheds—
One acre produced 442 bushels.
One acre produced 471 bushels.

The next year the land was sown with wheat, when the crop was as follows:—

Wheat on land treated with barnyard manure—
One acre produced 48 bushels, 18 pounds (of 61 pounds per bushel.)
One acre produced 42 bushels, 38 pounds (of 61 pounds per bushel.)
Wheat on land manured from covered sheds—
One acre produced 55 bushels, 5 pounds (of 61 pounds per bushel.)
One acre produced 53 bushels, 47 pounds (of 61 pounds per bushel.)

The straw also yielded one-third more upon the land fertilized with the manure from the covered stalls, than upon that to which the ordinary manure was applied.—*Ed.*

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