

the proper time and manner of applying the manure of barn-yards to soils. This is used to some extent by every farmer, and to this my remarks shall be chiefly confined. The leading questions on which variant opinions arise, are, should it be used in its long or unfermented state, or should it be decomposed before it goes to the field?—should it be spread on the surface and there left, or ploughed under the soil?—what season in the year should fields be manured?

Now, on these questions theorists and doctors differ widely; and we certainly shall not expect in this discussion, to come to any unquestionable conclusions. Perhaps we can pursue no course more likely to impart light and guidance, than in a free disclosure of our personal practices and the results that have followed.

Mr. Allen goes on to state that he generally applied his manure on the surface, particularly to grass lands, and thought it the best mode of application. Thus he speaks of it:—

Other authoritative names were yearly added to the denunciators of surface manuring. After several experiments, I determined to pursue the former course, and manure on the surface. This was believed to be best on my farm. All my manure for mowing land is composted. It is an object to increase the quantity, even at expense of strength. Much of the enriching qualities of unmixed barn manure, would, no doubt, pass into the atmosphere, if spread on the surface; and probably theorists have reference to this when they speak in such strong language against surface manuring.

Compost manure, when proper materials are used, and in suitable proportions, we think will draw more fructifying gases from the atmosphere than will be discharged into it. But, if farmers will use unmixed manure, let them plough it under the soil. We feel confident, however, that very little should be used in this way.

The proper seasons for manuring fields, cannot be fixed by any rules which all farmers would find it practicable to observe. My practice has been to manure at all seasons, when it could be done without injury to the soil or the growing crop. It will no doubt be most effective when applied near the time of vegetation.

With the various extracts in the form of salts, I have made few experiments, and those have been applications to the surface. A different course may in some cases be preferable—if so, we hope to hear it recommended in the progress of this discussion.

The order of nature, all farmers must observe, is to lodge the food which is to nourish future plants near the surface. Art is seldom successful when its grasp is extended beyond established laws.

The application of salt was next discussed. A letter from the Hon. Mr. Welles stated that he had made several experiments with salt—that when applying 30, 20, and 15 bushels to the acre of grass land, vegetation was destroyed—but on applying only 4 or 5 bushels to the acre, the result was favourable: the grass was of a deep green, and the feed was preferred by the cattle. Mr. Welles concludes as follows:—

I have pursued the subject in the variety of modes as herein detailed, to give some proof of the utility of salt when carefully applied, and of its power when otherwise used. To show this in the latter case, and as it may be as desirable to others as to me, I would add, that there were on my ground, set out more than half a century since for ornament and fashion's sake, several score of the tree called the Lombardy Poplar. These are great exhausters of the soil, and it became desirable, from their extensive roots and suckers, to get rid of them. For this purpose, I had recourse to the power of the article of which we treat. I cut down the trees, making a hollow in top of the stump: to this an augur was applied, and a hole bored to the depth of from 4 to 6 inches: 2 or 3 quarts of salt was put on the stump, and so effectual was it that no sucker ever appeared. The object was thus fully effected.

The discussion then proceeds, and we give it almost entire, as reported in the New England Farmer.

Mr. Buckminster stated that as to the best modes of applying manures, he had found much difficulty. He once adopted the theory that we could lose nothing, on the whole, by burying manure deep in the soil: he thought if it did not benefit the soil so much the first season, it would in time make its appearance in the crops, and nothing would be lost—that if the first crop did not get much of it, the second or the third would find it; and as he was satisfied that manures did not sink down in the soil, he thought his chief care should be to prevent its evaporation.

But after many trials, he is now well satisfied that in *heavy loams and clays*, we may bury our manures so deep under the green-sward furrow as to lose them. They lie in lumps and waste away without giving much aid to the growing blades.

He thought it better to overhaul the winter manure in the spring—let it ferment and become as fine as your time will permit: mix it with loam and other matter; apply it to the surface and plough a shallow furrow, or harrow it in thoroughly. Yet he agreed that there was no great objection to ploughing in long green manure on lands that had been planted the previous year; for when you till the ground, you mix the manure very intimately with the earth. It is not so when you bury it under the green-sward furrows.

He had also used ashes to good advantage on meadow lands when spread upon the surface at the rate of 50 or 60 bushels to the acre.

Dr. C. T. Jackson (a zealous friend of the farming interest, and always ready to lend it the aid of his learnings,) inquired whether any gentleman had used salt in the interior, as it was important to know the difference in its effects when applied on the seaboard, and away from the influence of the ocean.

Mr. Everett, of Princeton, said he had a field of corn which was much infested with worms, and by the recommendation of a neighbor, was induced to try salt, which he applied at the rate of two bushels per acre, with the desired effect. The corn grew well, and where the salt was strewed most profusely, the crop was most luxuriant. The field had not been ploughed for a number of years. He manured in the fall, and not very heavily, and yet the succeeding crop of wheat was good: he attributed these results to the application of salt.

Mr. Merryman, of Auburn, said he has used salt successfully in destroying worms in his garden; he had put it about his beans, corn, &c., and perceived that where it was applied, the plants were more luxuriant. He puts brine in his compost heap, and thought salt a valuable manure, but too expensive for general use in his section of the country. As regard to applying manure, he was not confined to any particular mode. It was a general practice among his neighbors to carry out the barnyard manure in the fall, but this he thought a bad plan. His custom was to carry his out in the spring, clean his yard, and spread his manure on the green sward and plough it under. That none of the moisture may be lost, he has men carting and spreading while another is ploughing it in—and in this way he raised 40 or 50 bushels of corn per acre. When manure is carted out in the fall, it loses much of its strength by the escape of the gases—but these are retained in a great measure when it is suffered to lie compactly in the barn-yard until spring. He uses compost for grass lands alone, spread on in the fall. He applies a liberal quantity of manure for corn, from 40 to 50 loads per acre. Planting one year with corn and then laying down to grass, he gets good crops for six or seven years. He ploughs his land from 4 to 6 inches deep.

Dr. C. T. Jackson asked information relative to the application of liquid manures. He said the disagreeable odor from urine would be entirely prevented by mixing it with salt muck or peat and a small quantity of gypsum. He recommended to farmers to take 20 casks of peat or muck in a dry state and one of gypsum or plaster of Paris, and have urine mixed with the same; this would produce an excellent manure. Casks half filled with this composi-