

will, sometimes, under these circumstances, be produced most abundantly; and the same will take place in some cases with wheat crops in a most eminent degree. By the system which we have adopted, we generally get a fair average crop of wheat without its running to any great extent of straw, which it often does under other circumstances. I think manure never does so much good to grass lands as when applied immediately after the hay has been sowed and carted from the field; at no other season of the year does it appear to be anything like so beneficial in its effects. And this is not a little extraordinary, because that is generally about midsummer, when we should think that the heat of the sun would dissipate and dry up the more valuable qualities. I account for it in this way, that it gets speedily covered in and buried by the growth of the grass; and, therefore, that the greatest possible amount of the manure may be thereby retained just at the precise period. The benefit is seen to a still greater extent the next year, from the grass thus immediately receiving the manure and preparing itself for the shoot of the ensuing spring; and the result is a much larger crop of hay in the following summer. The manufacture of manure is unquestionably a matter of the first importance in the management of a farm; and every means should be resorted to to increase the manure heap. But I scarcely go upon a farm without seeing that that is neglected, instead of any efforts being made to increase it. As far as my own practice goes, everything which can be converted into manure is brought together for that purpose; all kinds of vegetable matter, and even that which we harrow up out of the land is carted to the farm yard, rather than burnt. All are mixed up together with the dung, and help to increase the quantity of the manure. The moisture which escapes from the stable is spread over it, and the whole carted away day by day. The dung should never be allowed to accumulate at the stable door; it is better to cart it away each day than to allow it to accumulate in any particular place. Exactly the same rule should be observed with the bullock houses. We frequently see beasts kept in stalls for the sole purpose of producing manure; you may see the manure piled up all along the back of the sheds steaming away, and the ammonia passing off as fast as it can pass. Some people say it keeps the cattle warm. I have heard farmers say—"I know I am giving away my oilcake and turnips, but I must make manure." What is the consequence? Why, the most valuable qualities of the manure are lost. This is a very common practice, but it should be guarded against. It should each day be carted from the sheds and trodden into the land; and by nothing is this operation better performed than by a donkey; a cart, and a boy; in fact, nothing is more useful on a farm than donkeys in connection with horses. Throughout

Suffolk the system prevails of carting out the manure into the middle of the field; I have seen masses as high as this room. From this practice the loss must be considerable. I shall be very glad to hear the opinions of any gentlemen present who may have given his attention to this important subject.

Mr. TURNER of Exeter:—It is a general rule with me to issue an order to all my men that they will make this their maxim—"Never to waste a bundle of straw, and never to want one," which in plain English means, never to suffer a single truss of straw to be used which is not absolutely necessary, and on the other hand never to spare one when it is wanted to lick up the fluid portions of the manure. And with regard to the management of manure, this is the plan I adopt:—Every fortnight I cart it all out, and put a layer of each upon the same heap; I then suffer the cart to be driven upon the heap, in order to press it down as tightly as possible. This done, I put a layer of earth over all, in order to prevent any of the gases from escaping from the heap; I also put something under it to prevent anything from going away below. So far I stop my manure; and I continue this operation through the winter. I select some place with a hard bottom, where nothing can escape, and there the manure is deposited for the most part during the winter. With respect to liquid manure, I for one do not see any very great good it does by being carted out upon the land. It has been my custom to have a place under the farm yard, from which all the liquid was carried over the meadows; of course you expect the land to be benefited by this liquid. Whether it runs equally or not I do not know, but not more than an acre or two are to be found better than the rest. Therefore I think that liquid manures do not do that good which many people suppose. I think it is better not to suffer anything to escape from the farm yard. In almost all farm yards there are drains or tanks, or something to catch this liquid. In these tanks it has been my practice to keep some sort of rubbish, such as the stalks of potatoes, the stalks of turnips, or the stuff cleared away from the sides of the fences, and upon all this I pour the liquid manure. I think I cannot employ a boy and a donkey better than to fill the tank with rubbish of this description; and in following this practice I take care that nothing escapes from the farm yard; everything is carted on to the mixer. If you adopt this plan, you will, find that in the course of the year, you will collect a vast quantity of manure from this source alone. With respect to the use of manure, and the manufacture of manure, I do not say that mine is the very practice which ought to be resorted to; I only tell you what I find best calculated for my purposes. After what has fallen from Mr. Johnson this evening upon the subject of grass lands, I think there can be no doubt

but that it is very desirable in carrying manure to do so at a time when the grass will grow quickest over it. If you do that, you won't want to put it under ground. If you put the manure on the land the moment you have cut your hay, it is quite astonishing what a difference you will see. I cannot reason on the matter any other way than by supposing that it makes the grass at once begin to grow more quickly and speedily gets covered over. I do not agree with our excellent chairman with regard to carting manure out in the winter; I think that when the spring showers are falling, or in fact, whenever the grass grows most quickly, that is the proper time at which to manure grass lands. The few practical observations, gentlemen, which I have ventured to offer to you are the results of my own knowledge and experience.

The Chairman: it is not my practice to cart the manure upon clover, but it is in the case of other grass-lands, and I have found it answer remarkably well, as also with the succeeding crop of wheat.]

Mr. WOOD:—With respect to permanent dressing of grass-lands, I expected to have heard more upon the use of liquid manures. Some persons have tried the Dutch plan of manure, but not finding the crop of grass commensurate with the expense, have given it up. I agree with Mr. Johnson's view that the failure very probably arises from improper management of the manure, I do not, however, think we ought to allow any rain-water to be mixed with manure. If water be mixed with it, you will increase the expense of removal by increasing the bulk of the manure, and the advantage to be derived therefrom will not, in my opinion, be adequate to the increase of expense. I have tried this in various ways. I think it very doubtful whether carrying liquid manure is of sufficient benefit to pay the expense of doing so. At the same time, when we know that it answers to apply manure to the roots of grass, I think it ought to be applied in the liquid state. I cannot see how any plough can be made to convey manure to the roots of grass; but I can easily conceive that if a shower comes after manuring, it should be more beneficial than if the manure dries in the sun. My system is decidedly opposed to making the farm-yard manure depend at all on the quantity of rain-water. I have adopted Mr. Wurne's system, and I decidedly think it will have the advantage over all other plans for manuring arable lands. My plan is to keep the bullocks six months in their litter without removing it, every day turning over the manure that has dropped, and covering it with straw; and that I can do without raising its level more than two feet in a box ten feet in length. There no doubt will always be gentlemen who prefer their own long experience to anything new. I have heard what Mr. Johnson and the chairman have said about dry manure. Now, I find in my boxes that the manure is never dry. If I were to