

## Stock Department.

### Stable Drainage.

NOTWITHSTANDING all that has been written on the important subject of stable architecture, there are very few stables to be found in the country where a really efficient provision is made for removing and utilizing the liquid manure that is furnished by horses and cattle, who pass a great portion of their time confined in stalls. Not only is there, in consequence, a great loss of a most valuable fertilizer, but the liquid excrement accumulates and rapidly putrefies, giving rise to various noxious gases, which contaminate the air, and cannot fail to prove injurious to the animals who are compelled to breathe the poisoned atmosphere.

In some stables we find no pretence whatever at drainage of any sort. In others, perhaps in the majority of such buildings, drainage is attempted, but on various accounts is ineffectual. For example, the floor is made of common pine plank, a soft material, which the trampling and kicking of horses soon wears into hollows, in which the urine stands, a constant source of discomfort to the horse, and trouble to the groom. These floors, in most cases, slope back to a gutter in the rear. This arrangement compels the animal confined in the stall to stand always up hill, and puts a very uneasy strain on the sinews of the hind legs. To relieve themselves of this strain, we constantly find horses hanging back, and getting as far from the manger as the halter will allow. Then, again, either from shrinkage, or original carelessness in fitting the planks, the joints in the floor and on each side of the gutter behind, are so open as frequently to allow more liquid to pass through below than is carried away in the desired direction. This very large proportion of the urine soaking through the floor, completely saturates the ground underneath; and thus, besides being entirely lost to the farm, accumulates and putrefies in a hidden mass of filth, enough to gender the most malignant forms of disease. Besides all this, it too often happens that the liquid manure which does find its way outside the stable is, for want of proper arrangements to receive and store it, allowed to flow over the farm yard, or is washed away by the first heavy shower of rain that falls. Now, this state of things, so common on our farms, is both a serious waste of valuable material, and a great detriment to health; and might, we think, by a little better arrangement in the first construction of the stable, be altogether, or in great measure, avoided.

In England, most of the stable floors are made with stone, and in a former number of THE CANADA FARMER, we alluded to the advantages of this plan, and its prevalence abroad. No doubt, in Canada, the greater abundance of wood, and the necessity from limited capital of employing the cheapest material, will, for some time at least, render the use of wood floors very general, if not universal. But wood will not always and everywhere be the cheapest material to use even in Canada; and there is no question that we put up most of our structures in too temporary a fashion. We do not even build for one generation, still less for posterity. Setting aside, then, the use of stone for flooring as not feasible, we would suggest the employment of hard wood, especially oak, in place of pine, as being less liable to be worn into hollows. Again, in many of the best constructed stables abroad, the floors, instead of sloping back, are made to slope from the side towards the centre, where there is either a hole and grating connecting with a drain below, or a narrow gutter inclining back towards a drain in the rear. Could not we, in Canada, take a hint from this arrangement, and so relieve our stable animals from the uneasy uphill posture to which they have hitherto been condemned? At all events, whichever direction of slope we adopt, there is no reason why the joints should not be tight, so as to prevent the escape of

liquid into the ground below. They might be tongued and grooved, and still further rendered water-tight by caulking, and the employment of some cement that would resist the action of the urine.

Having thus provided for the effectual removal of the liquid manure from the stables, the next point is how to retain it in a convenient place for use on the farm. There is no question that, where the number of animals kept will warrant the expense, the construction of a proper tank is the best means of storing the most valuable fertilizer that the farm produces. But where the farmer has not the means to construct such a tank, or does not think his stock sufficiently numerous to justify the expense of the tank, pump, and liquid manure cart, still, by a slight modification of the ordinary plans, much may be done to prevent the escape and waste of the liquid manure. Where this cannot be received in an appropriate cistern, it should be taken up by absorbents provided in sufficient quantity to let none of the fluid run off. The solid manure from the excrements and bedding forms one most obvious and convenient medium for the purpose; and the manure heap, into which the fluid is conveyed, should be collected on ground hollowed out, to prevent the too ready escape of the liquid draining from it. Other materials, such as saw-dust, withered leaves, tan-bark, and dry earth, are excellent absorbents, and may be advantageously employed to take up the liquid manure. This fluid, as it comes from the stable, is generally mixed with a considerable portion of solid matter; the flow is therefore sluggish, and consequently, stable drains should be as straight as possible, and the fall as steep as the ground will admit, in order to facilitate the escape of the liquid.

There is another point to which attention should be paid. Some farmers appear to think—indeed the opinion is not unfrequently expressed—that the odor from a manure heap is particularly healthy. No wonder, therefore, that the unsavory mounds are generally in such close proximity to the stables, that the atmosphere which the animals breathe is liberally supplied with the pungent emanations from the decomposing mass. It is a great mistake to suppose that any such impurity can be other than highly injurious, especially to animals in confinement. Too much attention cannot be paid to the important matter of the purity of the air in stables; and ample provision should always be made by a proper ventilation for a constant change of air, and the removal of all noxious vapors. In view of this consideration, then, let the farmer not be afraid of the additional trouble of having his manure heap some little distance from the stable door or window. The increased labor of removing the manure will be counterbalanced by the improved health and comfort of the animals.

We would here again repeat the advice given in a former number of this journal, to erect manure sheds, or some efficient protection against rain, and so prevent the waste of the most valuable ingredients of the manure heap by washing out. We refer our readers to the notice which appeared in the Feb. 1st number of THE CANADA FARMER, of Professor Voelcker's recently published views on manure, and the best method of applying it. He shows that in the exposed manure heaps of the farm-yard, a large portion of the soluble constituents of the mass, which are its most valuable fertilizing ingredients, are dissolved and washed out by every shower that falls, and thus the efficacy of the manure when afterwards applied to the land is very greatly diminished. We believe that on this subject Professor Voelcker's views are thoroughly sound and practical, and a fresh item has been added to the debt which the agricultural interest owes to the enlightened views and wisely directed labors of such philosophical thinkers and earnest workers. Thanks to the press, and to agricultural journals especially, the benefits of such labors are not confined to any one country or community,

but are diffused over the civilized world, and come within the reach of every one who is willing to read, learn and profit. We are not, surely, too sanguine in predicting, that when our Canadian farmers generally keep stock of approved kinds, and in fair proportion to the extent of their land—the animals of course being heedfully tended with due regard to their health and comfort—when every atom of solid and liquid manure, thus furnished, is carefully husbanded, and applied to the land without losing any of its fertilizing qualities, we shall hear less frequently than we now do of worn-out land and unprofitable farming.

### Walking and Trotting.

WE were unable, from want of space, to insert the whole of the letter on "Fast Trotters," from our correspondent "Y. Z.," in our last issue. We now give the concluding paragraphs, which contain some excellent remarks on the importance of the walking qualities of the horse:—

"Sonris" has made a great mistake in saying fast trotters are slow walkers. I think he means to say they are what we call fair, square walkers, not apt to take little, short, prancing steps. They find no difficulty in putting one fore and one hind leg well forward at the same time, and when they get them there they have muscle enough to lift their bodies without an effort. My own experience is, I never saw a colt that could be made to trot fast but could also be made to walk fast; exactly the same formation is required to make a fast walker and trotter. I have seen trotting horses that were poor walkers, but it was because they had been trained to trot, to the utter neglect of their walking qualities. There is not the slightest doubt that the fastest natural trotters are the fastest natural walkers. Were it otherwise, I would not argue in favor of trotters for a moment. I perfectly agree with the Ed. CANADA FARMER—walking is the most desirable gait a horse can possess for agricultural purposes, in Canada. I once had a good deal of riding on horseback, in a mountainous country; the gait ridden was principally a walk, the horse I rode was about half blood, and well formed; he was about three and a half years old when I commenced riding him; at four and a half he could trot a mile in less than three minutes, and out-walk anything I ever met with that walked fair.

It would be just as absurd to say that good trotting horses are the best for ploughing heavy clay land as it would be to say the Clydesdale is the best for the road. The breeder must consider for what purpose his horse is wanted, and exercise his judgment accordingly. He must also be governed to a great extent by the mare he has to breed from. I will not venture to say what crosses are best, for it is a question which very few agree upon.

Y. Z.

### Trapping Sheep-Killing Dogs

Dogs will sometimes get together by night and stay away in search of sheep, and on finding them, will attack and kill most generally more or less of them, and injure others. I would recommend those having sheep killed to place them in a pile together, or to leave at least one of them where the dogs have left it; then put four or six lengths of fence around the dead sheep, made of sawed scantling. Commence by laying the scantling on the ground, and as you lay them up, draw your scantling in, the width of them every time around, and build a fence high enough in this way that a dog cannot jump it, then lock the corners well, and you have a pen that dogs can go over into from the outside readily, and when once over, they cannot get out again until they are helped out. In this way, in a few nights, you will be quite likely to get the very same dogs that killed your sheep, as they will have the curiosity or desire to go over the ground the second time.

It will be better to keep still about having your sheep killed, for if you make any search for the dogs you need not be at all surprised if you find that every man's dog is carefully shut up over night. It is not at all likely that the dogs will have had the blood stains washed from them, or any particles of wool removed from between their teeth, on their return home in the morning, after having been out over night in sheep-killing.—Cor. in Country Gentleman.