
brushed in with the seed. All this care is well repaid when a field can be kept in grass for thirty years or more. Thirty years ago I sowed forty acres with orchard grass. The land was manured with ten loads of tannery waste, fleshings, hair and lime, and ashes from the bark waste, mixed together. It has been top-dressed with manure every third or fourth year; has been limed every fifth year, and is now yielding two tons of hay per acre, and has been bastured every year from September until the winter closed in. It went out of my possession a few years ago, but the owner still cherishes that field, which he says is the most profitable on the farm. It was the first field of grass I ever sowed in August, and the seed was sown upon an oat stubble prepared as I have above described. The present year I have cut over twenty five acres of fine timothy which was sown last August in a similar manner.

RAIN-WASHED DUNG AND COVERED-IN YARDS.

Correspondence of English Live Stock Journal.

Whilst continual discussion is taking place respecting the value of different artificial manures, of the insufficient knowledge farmers generally have of chemistry and science to apply them in the right place and at the right time, it also behoves all agriculturists to make the best of, and to prevent any waste that can be avoided in the farmyard dung. It so strikes one when, after a heavy fall of rain, in attempting to get the cleanest way through a farmyard to have hard work to avoid getting up to the knees in slush, and to see at the lower part of the yard the discolored water running at a good pace into a pond or ditch, carrying away the real essence and goodness. A considerate mind may here calculate how many hundredweights of artificial manures would require to be purchased to make up for what is here wasted. Numerous are the farmyards in which this takes place year after year, the farmer drawing out the wet straw, minus the very properties which are required to feed the land. Although this waste cannot be always prevented, it can in a measure be avoided. In the first place, all the buildings should be eave-troughed to take away the water that comes off them. The outlay for this would not be much, but it would save a great deal of flooding, especially where the old-fashioned barns exist, which cover a large space the yard side The troughs will require to be chaned out only. occasionally, to prevent them from getting blocked, so that they overflow.

A great many farmyards are much too big, containing a quantity of unnecessary space. In the yards too much dung should not be left before i. taken away to the field, or clumped somewhere handy to where it is required, or the labor will not be altogether lost if it is thrown in a heap in the middle of the yard, so that the rain cannot wash through it. By doing this, it will save part of the labor when it is carted away, as it will not require so many hands to put it into the carts. Another reason why it should be thrown up in a clump, it will ferment, so that the seeds of weeds and rubbish that are amongst it will be killed. There will also not be the water to haul on to the land. I do not approve of allowing it to remain in a clump till it dwindles into nothing, for here I believe a great deal of the properties which are a benefit to the crops are lost.

I should say nothing would repay a landlord better than having farmyards partially or wholly covered in. The cattle, I am certain, would derive greater benefit, would thrive and get on better, with less cost than they would do standing up to the bellies in mud. And quite as much benefit would be gained in the dung made under these conditions. It would be of far greater value than that pictured at the commencement of this article. The tenant would be able to grow more corn, making the farm pay better, which means that he would afford to pay a more reasonable rent.

AUTUMN MANAGEMENT OF EWES.

English Agricultural Gazette,

It is well known to practical sheep-farmers that the present is a mot important period of the year in the management of breeding ewes. Yet not a few flockmasters are in the habit of treating their ewes rather carelessly during the last four months of the year. They try to keep them as cheaply as possible, which is commendable; where they err is in not keeping them straight on through autumn into winter in the same even condition.

After the lambs are weaned, the ewes may be kept for ten days or a fortnight on rather bare pasture, till the milk goes off them. There is then less danger of garget; and to make sure that none of the ewes are ruined at this stage, the shepherd ought to look out for any that seem to suffer from inflamed udders, and take the trouble to draw a little milk from them every other day. That sort ot attention pays, and it is humane. When the milk has left them, the draught ewes should be taken out and put on rape and other improving feed, whether they are to be sold lean or fattened for the butcher. The keeping ewes may have a few days' run on the newly-cleared stubbles. They will pick up any heads of grain left, and get off all the grass by the sides of fences; and while this lasts the pastures are freshening up a bit.

The tupping season is now approaching-for early spring lambs the sooner the better-and it is well to have the ewes in good thriving condition before then. It should not, however, be accomplished by a process of hurried and temporary The improvement should be gradual, stimulation. and not above what it is intended to sustain. The practice of supplying the ewes with turnips, cake, or corn two or three weeks previous to putting out the rams is open to grave question. It certainly goes against nature to feed the ewes extra well one month at this stage, and then put them on mere sustenance diet for the next three months. It is from mismanagement at the period of conception, and subsequently, that we can trace, months hence, the causes of abortion, of weak and dead lambs, and other disastrous results. Nor is this the only evil of "flushing" the ewes when they are put to the rams. From actual test we are convinced that ewes which have been flushed one year are never so prolific the next. Few shepherds can have failed to observe this fact. And, indeed, the extra number of lambs raised in any year by this system is, on the average, not very great. Twenty lambs per 100 ewes is about the most we would expect to increase the yield of lambs, by a month's extra keep costing say \pounds_{15} per 100 ewes. This is a heavy tax on the twenty lambs; and if, on the This is a other side, we throw in a little extra for the better quality of more single rams, the better average condition of the whole flock, and a little more wool there remains little, if anything, to be credited to the practice of "flushing" the ewes put to the rams -even when no injury follows from subsequently letting them down in condition. We are not to be understood as advocating a poor diet at tupping-time -by no means; give them as good a diet us can be sustained through the autumn and winter.

When the grass begins to get scant in October, the time when many of the rams go out, it would indeed be false economy to allow the ewes to be

As to the nature of the food best adapted for breeding ewes, when it is intended to augment the failing grass-rape, cabbage, turnips, or any other green food is preferable to grain. Very little of the grain crop will keep the ewes going along nicely and at small cost. A load or two thrown to them on the pastures daily is better than folding the ewes on the crop. When the weather gets keener, and the pastures afford no support, then, in addition to the green food, each ewe should have half a pound of good hay daily. There is no better winter food for sheep than good, sound, fresh hay, and in ordinary years we question if there is any cheaper. In Canada and the Northern States of America, large numbers of sheep are kept, and in many cases they get nothing but hay the whole winter, or nearly six months in the year. Those who have gone in for ensilage, may bring their ewes equally well through the winter and cheaper on silage alone, without either roots or hay.

WHEN TO WATER HORSES.

The best time to water a horse is an hour before or an hour and a half after eating. If watered immediately before eating the temperature of the stomach is lowered beyond the digestive point, and the food is not acted upon till the temperature gets back to where it ought to be. Suppose his master takes him to the watering trough immediately after eating and his stomach is full of food and he drinks a pail or two pails of water. The consequence is that a portion of the food is forced out of the stomach and is swept along into the larger intestines without assimilation. In France some years ago I saw some horses that were going to be killed. They were fed coarse beans, and immediately after they were allowed to drink all the water they would, and were then killed and dissected, and some of these heans were found 26 feet distant from the stomach itself in the intestines. - Secretary Russell.

The English *Live Stock Fournal* thus discusses draught horse action : "There are two kinds of action always to be considered in draught-horses; first, the natural action one sees before him ; second, the ideal action of the horse in the work which he has been produced to do. The former is the one in which young colts and fillies may be awarded their places of honor with safety, the latter must be used in considering aged animals. If a horse has the fault of narrow hocks, without leverage, no matter how well he may be bred, no matter how clever he may move, consider him as a gelding on the face of a hill with three tons behind him in a wagon. This want of street study on the part of breeders is always what suggests itself to us in 'If he is not sound, he is fit for nothing,' says one; 'If he has no hoof, he is no horse,' says another; and, we may add, if he is mechanically mis-shapen in any essential point, he is just worth his price per pound in cats' meat."

Many farmers of western New York, where the Hessian fly has been very abundant this season, are planning to sow late as a preventive of its ravages next year. This is a very wise precaution. It was found by sowing small plots of wheat each day at this college a few years since, that all sowed after September 20th were entirely free from the insects. It is the wisest to sow early and give