

lars, darkness is not at all necessary to their successful cultivation. The heaviest crop of mushrooms I ever saw was grown by John Cullen, one of my old foremen, at South Bethlehem, Pa., in a dilapidated old cistern under his green-houses, and in which the darkness is absolute. About a month ago I visited John G. Gardner at Jobstown, N. J., who grows mushrooms extensively for the Philadelphia, New-York and Boston markets, and in addition to a very large, dark cellar, he has range after range—hundreds of running feet of green-houses, which are used for fruit-forcing in spring and summer—now filled with string after string of frames devoted to mushroom culture, and this is in the full daylight, except that the sunshine is intercepted by other crops growing on stages above the mushroom frames. And in my own case I find the mushrooms almost always come thickest near the doors of the cellars.

Horse-stable manure is what we use for the beds. Get it as fresh as you can, and if it has been pretty well moistened under the horses' feet in the stable, so much the better. Shake out and throw aside all the dry strawy part. Throw the manure into a heap to heat. When it gets warm, turn it and pile it as before, then turn it every day or two till the violent heat subsides—say in three weeks. Many growers mix loam with the manure. Some mix the loam with the manure at first—I do this; others do not add the loam till a day or two before the beds are to be made up. Mr. Denton of Woodhaven does this; and in many cases (several of my own beds, too) no loam at all is used in the manure. Manure alone is capital for floor-beds, but for shelf-beds I like the loam mixture best. Common field loam is what I use.

Make the beds on the floor, any length and breadth convenient, and—as you will have no artificial heat—18 or 20 inches deep, and in building them tread them as firm as a turnpike road. In a few days the heat will run up to about 120° or more. Wait till it declines to 90°, then spawn the bed. And as you have no artificial heat, cover the bed over with some hay or straw, the same day you spawn it, and leave it there for ten days. Then remove this covering, and add a 2-inch lining of loam all over the bed, firming it well with the back of the spade, and at once replace the straw covering, whose thickness—4 or 12 inches—will depend on the lowness of the atmospheric temperature. Five weeks after this—that is in six to seven weeks after spawning—you may hope to see mushrooms. All that will now be necessary is to keep the place as close and warm as possible, and change the inside lining of straw once, maybe twice, should it get wet from condensed moisture from the beds.

But it is now near New-Year's and pretty late to prepare for mushroom beds this season. To get and prepare the manure will take over three weeks; from making the bed up till spawning time will be some two weeks; and from spawning till mushrooms appear will be six to seven weeks—in all some three months. Then you will have only about a month's cutting before the maggots will render the crop worthless.

WM. FALCONER.

Queens County, N. Y., Dec. 13.

PASTURING COWS.

It is a well-known fact that the different domestic animals of the farm all pull and eat their grass in different ways. This is partly due to several causes, such as the predilection of each kind for particular grasses, and aversion to others, and also the arrangement of the incisor teeth in the mouth, as well as the size of the muzzle itself. The sheep is one of the closest feeders we have; in fact, with the exception of the rabbit and kangaroo, it will eat a pasture bare; than any other animal. This is, of course, due to the small size of the mouth,

together with its predilection for the finer grasses. Next to the sheep comes the horse in this respect, for, although his mouth is large, yet the fact that he has teeth both above and below, enable him to bite close. It is very noticeable in a pasture where horses are alone, that they eat over the land very unequally. Some of the "sweeter" spots are nibbled in to the very roots, while other spots are not touched, but left rough. Cattle, on the other hand, have not only a large muzzle, but also the absence of upper teeth, so that, of necessity, they cannot bite fine or close, and, therefore, we find with them that their grass is rougher, and less bare in parts than with the others.

It would, as a general rule, be best to let all graze together, because, in this way each can have what the other does not require, and thus more might be made out of the land. It seems certain that each has predilections for certain grasses if they can get them, though we do not know much about this matter as yet and thus each might be gratified without interfering with the other. As a matter of fact, in practice, several kinds of stock do graze well together, with one exception. That exception is the case of sheep along with cows. The fine flavour of summer produce and the cream percentage yielded depend altogether on the presence of the fine clovers, grasses, trefoils, etc., and if these are removed, as in recently sown down "seeds," the produce is comparatively poor. This is the reason why old pasture always yields more cheese and butter than young grass. Now, if we put on sheep, these very varieties are removed as they grow by the closer feeding of these animals, so that the cows get nothing but the coarser and quicker-growing grasses, and thus their yield will become deficient in richness. In fact, it has passed into a proverb in some places that there is nothing that will "cream the milk" more quickly than pasturing sheep along with the milk cows, and it should, therefore, never be done. Too long or coarse pasture is of course no benefit, and, in fact, the quality of the milk is often in the inverse ratio of the bareness of the pasture but it is the cows themselves that must eat it bare. Some other kinds of stock might be allowed, such as horses if they are quiet, but the cream of the pasture must be at the service of the cows, else there will be little cream on the milk.

Cows are not, of course, doing much outside at the present time, but the arrangements of the farm for next year as to cropping and grazing must be thought over, settled, and the fences, gates, and other etoeteras seen to during the winter. It will be best therefore to let the cows have their fields to themselves, and make up for it by putting on such a number as will keep the pasture rather bare.

P. M'C.

GRAND SWEEPSTAKES WINNER.

LaFerte has certainly become one of the most popular horses since the Chicago Live Stock Show ever brought to this country. In this unusual ring of Percheron horses he was shown in competition with animals a number of which would have done honor to the highest prize of such an institution, but the blue was tied to his bridle amidst the applause both of horsemen and spectators. In "Battle of the Breeds," when all the prize winners of the different breeds came into competition with each other, he was declared the "best horse" and carried off the grand sweepstakes. He is indeed a grand show horse. LaFerte 5144 (452) is a dapple grey, 16½ hands high, weighs 2,040, foaled in 1881, bred by M. Guillemain in the department of Orne; sired by Philibert (760), out of Jalib (7694) by Brillant 1899. The winner also in the three-year-old class for mares at Chicago last November was a

(1) I perfectly agree with Mr. McConnel.

A. R. J. F.