

Correspondence.

UNDERDRAINING.

CHICAGO, ILL., April 29, 1872. ED. FARMER: Will it pay to underdrain? is a question variously answered. To drain land well, that is, to drain land so that the underdraining will be permanent, will always be profitable, where land is worth from thirty to fifty dollars per acre. Where land is worth less than these prices, it will not be profitable, because it will cost more to drain wet land than it will to purchase good dry land. On an average an acre of wet land can be drained with draining-tile for fifty dollars, and the increase of the crop resulting therefrom will be one hundred per cent. The reason for using draining-tile is that it will last, while wooden drains will decay within a few years. The depth of the drain should be three feet, and the drain should run with the slope of the land, at intervals of from forty to sixty feet, so far as practicable with the lay of the ground. When the land slopes in one direction the drains should be parallel. Where stones are plentiful on a farm, they can be used for drainage at a cost less than is required for tiles, and make equally good drains. Draining tiles can be delivered on the farm for \$25 per thousand. It will take from 800 to 1,000 feet to each acre, as the ditching will be about fifty to sixty rods. It will cost fifty cents per rod to lay this tilling, making in the aggregate fifty dollars per acre to underdrain in a permanent way. Drains of sixty rods in length should be laid with 1 1/2-inch tiles without collars; with collars, 1 1/4-inch. Drains one hundred and twenty rods in length require tiles of 2 1/2-inch. Drains from 6,000 to 15,000 require 3 1/2-inch. It is asserted by a farmer of great experience that one hundred acres will require only an outlet of eight inches, which is nearly correct. It might vary a little from this in localities where the lay of the land is different, and where many springs rise to the surface. Under the conditions as set forth above there can be no question, in my mind as to the profitableness of judicious underdraining. It is of no lasting advantage in putting down wood for drains, as in the long run it will cost more than tile-draining. The writer's practical knowledge of underdraining was acquired in the State of New York, and he believes it to be very nearly correct. Underdraining renders the soil dry, so that it can be worked at any time, besides making it porous and capable of receiving fertilizing agents as manures, or carbonic acid and ammonia from the atmosphere and the rain.

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The Horse.

HORSES NEED A SABBATH.—At a meeting of the British Association at Dublin, Mr. Charles Blane, of Caspel, read a paper relative to his extensive car establishment, after which a gentleman stated that at Pickford's, the great English carrier's, they could not work a horse more than ten hours a day, and wished to hear Mr. Blane's opinion on the subject. Mr. B. stated he found by experience, he could better work a horse for eight miles a day for six days in the week, than six miles a day for seven days. By not working on Sunday, he effected a saving of twelve per cent. Mr. Blane's opinion on this point is of the highest importance, for he has over nine hundred horses working sixty-seven conveyances, which do travel 4,241 miles. It is also the result of forty-three years' experience. Scientific American.

PERCHERONS AND THEIR CROSSES.—A correspondent of the Country Gentleman, while admitting that the pure Percherons are all that has been claimed for them, gives facts that

show that experiments in crossing the Percheron with ordinary or inferior mares of this country have resulted in producing horses that were "generally punchy, of low carriage, short steppers, hardy, serviceable pudge, that did not meet the public demand for rangey, stylish road horses." Still he admits that "by a proper selection of draught mares to begin with, and by breeding their descendants, generation after generation, to the pure Percheron, we might get a breed so nearly full blood as not to be materially different from the imported. Indeed, if the mares were judiciously selected, the first cross might be a first-class draught horse."

MILE RACE COURSE.

The most approved shape for a race-course is an oblong, with curved ends. The reason why this form is preferable to any other is, because it affords two straight sides on which the horses may be indulged in their utmost bursts of speed, and because it obviates the objection to the continuous sloping necessary to the track of a perfect circle. The turns also have their advantage; for inasmuch as a horse can only be kept at the top of his speed for about 400 yards, he gets involuntary relief at each end, however desperately or unjockey-like he may be managed. The following directions may be taken as a guide: Select a level field of 42 acres; draw through the center of it a straight line of 440 yards (a quarter of a mile). On each side of this line, and at an exact distance of 140 yards from it, draw parallel lines of equal length, so that the space between the two outer lines will be two hundred and eighty yards. This being done, drive a stake at each end of the center line, fasten a cord thereto, extend the cord at right angles for 140 yards until it touches the end of the outer lines, and then describe with the extreme end of the cord an outer curve or semicircle between the ends of the two outer lines. You will then have the shape you want; the continuous outer line describing it being exactly a mile (1,760 yards) in length, divided into four sections of a quarter of a mile (440 yards) each, and enclosing 42 acres of ground. From this outer line or track set the fence of the course three feet back. In this way an exact mile (as near as may be) is preserved for the actual foot track of all the horses. In brief, then, mark out for your course a parallelogram of 440 yards long and 280 wide, with curves thrown out at the ends, of equal lengths with the sides, and you have the course you want. The first distance-post is placed at 60 yards from the judges' stand; the second at 240 yards, and the start is 60 yards before entering the turn. The track should be graded round the turns, like the track of a railroad or circus, the outer portion highest, so that a horse can extend himself at full speed as well around the turns as on the straight sides.—Wilkes' Spirit.

Useful Receipts.

CRACKER PIES.—Roll six crackers fine and put them in a four quart-pail or kettle, pour over them three-fourths of a pint of vinegar, two cups of molasses, and a quart of boiling water. Boil in the stove half an hour, adding more water, if necessary, to make quite thin. Add salt, raisins and all kinds of spices, and make short crust for four pies. Bake about twenty minutes, or until the crust is done. A little sugar may be added before the top crust is put on. POTATO YEAST.—Pare, wash and grate four good-sized potatoes, add to them one half teaspoonful of salt, two-thirds teaspoonful of sugar, pour over this mixture one quart of boiling water, and when lukewarm add one cup of good yeast, and let it rise. It does not keep quite as long as hop yeast in hot weather, but makes sweeter bread. If kept in a cool place it will keep two or three weeks in summer and double the time in winter. COOKIES.—One teaspoonful of butter, one of thick cream, two of sugar, one coffee cup of milk, one teaspoonful of soda, two of cream of tartar, half a nutmeg, and flour to knead soft. Bake in a quick oven. CORN BREAD.—Take four cups of sour milk, one of these partly filled with cream; one egg, a little salt, two even teaspoonfuls pulverized soda;

mix the soda with a little corn meal, and stir altogether, till it foams; then add corn meal till a thin batter is obtained, and pour into hot tins, oiled, an inch deep, and bake in a quick oven.

BUTTER SPONGE CAKE.—One cup butter, two cups sugar, one and one-half cups flour, six eggs, one teaspoonful of soda. Dissolve the soda in a table-spoonful of milk; rub the cream of tartar evenly in the flour.

COCONUT JUMBLES.—One pound of butter, three-quarters of a pound of sugar, three eggs, one pound of flour; add by degrees a grated coconut, so as to form a stiff dough. Bake in a quick oven.

SODA FRIED-CAKES.—One cup sweet milk, 1/2 cup sugar, 1 egg, 2 table-spoons melted butter; 1 even teaspoonful soda, 1/2 teaspoonful cream tartar, a little salt and spice to taste.

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