

intelligent management, and cannot be entirely satisfactory, as the temperature in many cases changes suddenly when there is no one present to regulate them. Probably the better, though more expensive plan, is to have the shafts for conducting the fresh air into the stable, say one or more shafts, of tile one to two feet in diameter, sunk five or six feet underground, and extending to a greater or less distance from the stable—at least one hundred feet, better if much further, and terminating with a revolving cowl six or eight feet high. The temperature of the earth below the frost line is much higher than the atmospheric air, and the latter, in travelling through the tile, becomes heated without losing its purity before reaching the stable. The shaft can either open directly into the stable, or, better still, be continued along in front of the horses, with perforations to allow the exit of air at each stall. There are many more systems of ventilation, and the plan to be adopted will necessarily depend much upon the nature of the building, the ideas of the owner, and financial conditions. Horses cannot thrive and render satisfactory service if housed in a poorly-ventilated stable. Hence, we say have ventilation, even if it be at the expense of heat. Horses or other animals can stand a low temperature with pure air much better than a warm temperature with a vitiated atmosphere. Heat can be supplied by blankets, but nothing will take the place of pure air.

"WHIP."

The Driver of Dan Patch.

Words of praise regarding Dan Patch's wonderful mile in 1.55½, at Lexington, are superfluous. Nothing can so truly portray the unparalleled greatness of the mile as the division of the time into quarters. The stallion paced the first quarter in 29½ seconds; the second quarter in 28 seconds; the third quarter in 28½ seconds, and the fourth quarter in 29 seconds. Harry Hersey, the man who drove Dan Patch in his remarkable mile, is not known as a great driver, but he seems to have solved the problem of how a horse should be trained and rated in order to make his speed useful, driving the entire mile far better than some trainers have done who are far more famous in the racing world than he is. Dan Patch is truly a pacing phenomenon, but had he fallen into the hands of a man less capable of using his brains than Hersey seems to be, he probably would not now have a record as fast as 1.55½. It behooves all, therefore, to give proper credit to Mr. Hersey for the part he has taken in placing the world's pacing record second below where the great number of harness-horses enthusiasts ever expected to see it placed.—[The Horse World.]

Horses vs. Oxen in Ye Olden Days.

A writer in the Mark Lane Express draws attention to a controversy which raged in Britain over a hundred years ago concerning the respective merits of horses and oxen for farm labor. Probably one hundred years from now some one will interest his readers by a reference to the discussions which are taking place now with regard to the relative values of horses and motors for road and farm work. The writer says:

"Messrs. J. Bailey and G. Bailey, who in 1797 published a well-written and interesting book on the agriculture of Cumberland, Westmoreland, and Northumberland, make a comparison between the cost of oxen and horses for farm work. They lay it down as an indisputable fact that it takes eight oxen to do the work of two horses, or, at any rate, for the first year, though after that they say half a dozen will do the same work. The cost of an ox is reckoned at £6 5s. per annum. The ox is presumed to improve in value £1 per annum, so that the net cost per ox is £5 5s. This works out with a team of oxen consisting of eight the first year, and six the two following years, to an average cost of £40 per annum.

"The cost of a horse's keep in those days is enough to make any horse owner who has to pay for his provender wish that he had lived then. The prime cost of keeping a horse for a year is estimated, roughly, at £15 15s., made up in the following manner:

	£.	s.	d.
Summering, 2 acres of grass	2	0	0
Wintering:			
Straw, 13 weeks, at 9d.	0	10	0
Hay, 1½ tons, at £2	3	0	0
70 bushels of oats, at 2s.	7	0	0
Shoeing and harness	1	0	0
Annuity to pay off £25 in 16 years	2	5	0
	15	15	0

"The annuity, of course, is what must be written off for depreciation, and seems fairly calculated. It will be noticed that the straw is totalled at 10s., instead of 9s. 9d., which is the exact amount, probably to make even money in the average. It is, however, a matter of very slight importance. So that even at the date when labor was cheap, the horses came out at a cost of £9 10s. per annum less than the oxen. Such

being the case, it is a wonder that oxen were used such a long time as they were.

"It is interesting to notice that even in those days the Northumberland farmers went to Clydesdale for the best of their draft horses, and they are described as standing from 15 hands 2 inches to 16 hands, and as strong, hardy, remarkably good and true pullers, a restive horse being rarely found amongst them. We are also told that the horses bred in the country are of various sorts, from the full-blood racer to the strong, heavy, rough-legged black. The latter, I take it, would be the ancestor of the Vardy horse, about which breed, curiously enough, there is no history to be found in any old book I have come across. There seems to be a certain tradition hanging around them, and I have heard individuals of the breed highly praised. The late Sir Jacob Wilson told me that he remembered seeing them in the days of his youth, but that even then they had become practically extinct. I have never even heard the derivation of the name. In all probability, the increasing esteem in which the Northumberland farmers held the Clydesdale caused the home-bred to be absorbed. Whatever the reason, there can be little doubt but what the active, sharp-stepping Vardy, with his good shoulders, would have been invaluable nowadays as a foundation for breeding heavy troop horses."

Value of Pedigree.

The pedigree of a horse is simply a record showing the animals that have in succession entered into the breeding of the individual. It shows, too, that he belongs to a distinct breed, possessing, therefore, the prepotency of that breed, and in addition to this possession, it guarantees a certain degree of individual prepotency of the ancestors on each side of the pedigree. To ensure both breed prepotency and individual prepotency the animal represented by the pedigree should have several recorded animals on

pressive sire, and, on general principles, the somewhat indifferent individual that has a fine line of ancestors, as shown by his pedigree, is greatly to be preferred to a "scrub," grade or cross-bred animal, for breeding purposes. We say this for the good reason that his progeny will be quite likely to partake of the good qualities of the ancestry, rather than the indifferent qualities of the individual. There are many exceptions to this rule, and experiment is, therefore, the sure way of proving the prepotency of the individual stallion. It is always best, however, to choose a sire that has both excellent breeding and individual excellence of form and quality in every respect.—[Wisconsin Bulletin.]

Aged Horses as Sires.

A writer in the Live-stock World (British), discussing the age of breeding horses, and its relation to their usefulness, says:

"It can be seen in our own country that horses have got their best stock when 12 and over. A very great horse was Harkaway on the Turf, but with the very best opportunities he was scarcely a great success until 1850 (then 16), when he got King Tom. Irish Birdcatcher, a very good runner, was foaled in 1833 and lived until he was 27, his death being recorded in 1860. Nearly all his best stud results were obtained after he was well in his 'teens. He got Daniel O'Rourke, his Derby winner, in 1848 (i.e., 15 years old), and Saunterer, decidedly his best stayer, in 1851, so 18 years old. Voltaire ran second in the St. Leger in 1829; got his first St. Leger winner, Charles XII., in 1836 (10 years old), and his second St. Leger hero, Voltigeur, in 1847 (20 years old). Lord Lyon had his best son, Minting, when he was 20; and Stockwell got Doncaster when he was 21.

"It can be seen, then, that the very best horses and the very best lines in the studbook

would have been lost if breeders had been afraid of sires being too old. I expect it could be proved in the breeding of all kinds of animals. The survival of the fittest is a very apt saying, but the fittest may survive a long time. The old horse on the prairies or moors will keep off the young ones for an extended period, so will the old game cock against the aspirations of youth. It is, perhaps, a breeding problem that Prof. Ewart might explain better than anyone; but there are these facts to consider, that only a few reproduce their own goodness, and that very often they are in full maturity when they do so. It teaches a lesson, therefore, that it is safer to try proved material than to experiment on what one knows



Serigny 47647.

Percheron Stallion. Imported by Hamilton & Hawthorne, Simcoe, Ont. Winner of first prize at the Canadian National, Toronto, and the Western Fair, London, 1905. Sold to a company at Hanover for \$3,000.

the dam's side, and the more and better the mares, the more certain will be the good breeding qualifications of the pedigreed animal. The sires should be of equal merit, and the most important point is to see that they are of known purity of blood and individual excellence; also that upon neither side is there an objectionable outcross or the presence of a sire or dam noted for unsoundness or other objectionable trait, character or feature. Furthermore, the character of the man back of the pedigree should be taken into account. The pedigree is comparatively valueless, unless the breeder and seller are noted for integrity; nor is pedigree a sufficient criterion of merit, or an apology for individual imperfection, or unsoundness. The animal should be a good individual, and if, in addition, there is a long line of excellent ancestors upon both sides of his pedigree, there will be good reason to expect that he will, with considerable fidelity, transmit to his progeny the true characteristics of his breed, those of his family and those of his individuality.

In some instances an individual horse with a long line of reputable ancestors is himself a comparatively poor individual, yet may prove an

nothing about. The foreign agent may think himself very clever when purchasing a horse for £60, with nothing more than his pedigree and his looks to recommend him, but, on the average of even useful ones of a low class, it is 20 to 1 against the animal being of any use at all. This is the danger foreign buyers are running into, and it would be much safer for them to do as the French did years ago—to have no particular age restriction, and pay their attention specially to the tried horses. Turf performances might have something to do with it, but there are special advantages now to get horses that have been passed sound for King's premiums, with their performances taken note of, and in most cases by the time they are nine years old there is produce in the districts located to them to show value as reproducers. In the higher classes for sires wanted to get race-horses there is no doubt about it, and 12 and upwards would be nearer the mark than 9.

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