

and unwieldy, and suitable only for carrying the knights of those days with their heavy armor. The effects of gunpowder rendering the armor useless, both that and the kind of horses required to carry it fell into disuse, and a demand was created for a higher and more active breed of horses. The discovery of steam, a few centuries later, increased this demand by still further superseding the necessity for using horses of a large size. But it is to the introduction of the race-course, and to the preserving the pedigrees of such horses as were winners in the race, more than all else beside, that we are to attribute the production of a breed of horses, alike famous for possessing the qualities of strength, swiftness, beauty, docility, courage and durability, which are found in those that are thoroughbred.

It is not necessary for farm and road purposes, that horses should be of pure blood; but it is an advantage to them to have more or less of it, according to the work required of them, as it has been ascertained from actual experience, that for all purposes a mixture of the thoroughbred is beneficial even in the cart horse.

It is a very common, but mistaken idea which some farmers have, that the largest males are the best stock getters and large prices are accordingly paid for the services of large stallions, bulls and rams, which results in deterioration of the stock, and disappointment and loss to the farmer. There are certain well defined rules, that may be found in Youatt's work on the horse, which I will quote for the benefit of those engaged in breeding and improving stock, as follows:

1st. **MUSCLES.**—The muscles and tendons, which are their appendages should be large by which an animal is able to travel with greater facility.

2nd. **THE BONES.**—The strength of the animal does not depend upon the size of the bones, but upon that or the muscles. Animals imperfectly nourished during growth, have their bones disproportionately large. Large bones, therefore, generally indicate imperfect organs of nutrition.

3rd. **ON THE IMPROVEMENT OF THE FORM.**—When the male is much larger than the female, the offspring is generally of an imperfect form; if the female is proportionately larger, the offspring is of an improved form. The proper way to improve the form of animals, is to select a well formed female, proportionately larger than

the male. The improvement depends upon this principle—that the power of the female to supply her offspring with nourishment is in proportion to her size, and the power of nourishing herself thorough the excellence of her own constitution. The size of the foetus is generally in proportion to that of the male parent; and, therefore, when the female parent is disproportionately small, the quantity of nourishment will be deficient, and her offspring disproportioned accordingly; but when the female, from her size and good constitution, is more than adequate to the nourishment of the foetus of a male smaller than herself, the growth must be proportionately greater.


To produce the most perfect formed animal, abundant nourishment is necessary from the time of its birth until its growth is completed.

The power to prepare the greatest amount of nourishment depends upon the size of the lungs to which the organs of digestion are subservient.

To obtain animals with large lungs, females should be selected from a breed of large size to be put to a well formed male of a breed that is rather smaller.

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WINTER CARE OF CATTLE.

OW many farmers there are who, towards the close of winter, complain of being short of fodder, and are compelled to purchase hay at high prices to carry their stock through until pasture time. I know from experience what this is, and find it does not pay.

There are two causes and also two remedies for this state of things, namely, too heavy a stock, and to wasteful a feeding. For the former, the remedy is obvious; for the latter, a great many farmers have not yet discovered a preventive, but go in the old way of feeding, in commonsquare racks in the yard, either corn fodder, straw or hay. Herd is where the loss occurs; and did every farmer know the great gain there would be in cutting up every thing he feeds, instead of feeding it whole, there would be no more complaint of short fodder. I have tried it, and find that I can winter ten head of cattle, on cut fodder, now, where I only wintered five head, last year, and, what is more, keep them in better order. I use a fodder cutter (worked by hand or horse as the case may be) and feed in the feed in troughs six feet long, eighteen inches deep