

marvellous wisdom of the Creator, in planning for the comfort and preservation of his creatures. The foot, however, in the present article comes more immediately under our consideration.

We will, therefore, merely point out the ligaments and tendons which aid so much in providing that beautiful elasticity so characteristic of the leg of the horse, which so materially aids the structural arrangement of the foot, in preserving it from the injurious effects of concussion, and in the various altered circumstances to which it is exposed in a life of domestication and all its consequent mismanagement.

Season for castrating animals.

The season is a most important consideration. In pigs and others animals that tend to heal by adhesion of the lips of the wound and without the formation of matter, a cool or even a cold season is not prohibitory; but in the horse, in which all wounds tend to form matter, and where the dangers of inflammation extending to the abdomen are so great, a temperate or even warm season is the best. The end of April or May is usually preferable as being mild but not hot, and at the same time equable. From July onward the intense heats unduly favor putrefaction in the products of the wound, and excessive swelling in its walls. At this season, too, flies prove a source of great annoyance, and are even liable to infect and poison the sore by coming direct from carrion or diseased surfaces.

So long as the nights are liable to be frosty or very cold, colts should not be castrated unless they can be stabled and protected. In all cases the newly-castrated animal should be protected against cold rains or dews, drafts of cold air in buildings, large drinks of ice-cold water, and damp bedding. Wet weather, but above all that which is characterized by a succession of thunder storms, is to be feared, not alone because of the danger of wetting and chill, but because at such times there is a special tendency to rapid decomposition in all dead organic matter, and therefore to putrefaction in the secretions of the wounds. This tendency is familiar in the souring of milk or dough, and in the penetrating smells that rise from any accumulation of damp vegetable rubbish. In such a season, therefore, the operation should be deferred until the return of steady, clear weather.

For reasons similar to the above, crowded, close, ill-ventilated, and uncleanly buildings are most dangerous, and animals from such places are best kept for some time in more healthy quarters prior to castration. The vicinity of slaughter houses, rendering works, dissecting rooms, manure manufactories, decomposing dung-heaps, etc., are to be avoided, as calculated to induce unhealthy action and gangrene.

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Castration of animals.

Age.—As regards age, the young usually suffer less than the adult; and the suckling animal has much in its vigor, in its rapid growth, and in the stimulating quality of its animal food to induce a healthy action on the wound, and an early healing. At this early age, too, the testicles are relatively smaller, so that their removal is less likely to produce shock, constitutional reaction, and fever. In colts the danger increases from two years old and upwards, or, in others words, as the organs become more fully developed and the masculine functions become active and come to be a controlling power in the system. Many other conditions usually determine the time (age), as, in horses, the desire for a heavy forehead, a graceful carriage, better vigor and endurance, a delicate, mobile neck, a fine mouth, a long mane, etc., but these are apart from the present question, which is one of safety only.

Health.—Perfect health is essential to safety. Any pre-existing disease is pretty certain to be aggravated by the irritation and fever resulting from the operation; any impairment of the nutritive functions will retard the process of healing in the wound, or induce an unhealthy action resulting in permanent injury or death. If disease germs are in the system, their development is hastened, and the system has to bear the attack of two different troubles combined; or both concentrate their action on the same point, and the extension of the diseased action to the susceptible structures of the abdomen too often precipitates a fatal result. Thus strangles, so common in young horses, causes a low type of inflammation in the groin, with exudations, adhesions, abscesses, and even gangrene. Glanders, too, is attended by the development of the glandular material in the wound and elsewhere, and always by a fatal issue. Scarcely less injurious are influenza, catarrhal fever, bilious fevers, etc., etc., the seeds of which find a fertile field for their development in the system fevered by the operation.

The system most favorable to success is one in high condition, with full, hard muscles; clear, bright, prominent eye; smooth, sleek, healthy coat; pulse full, strong and regular; and spirit lively and ardent. The best condition is, in short, that of the trained animal, in which the wounds heal with that marvelous rapidity which we see in the athlete or race-horse. It is not the fat animal, soft, flabby, and deficient in endurance, but the one that is all muscle and sinew, and that will not tire. Yet, even with this, it is important to give daily exercise after the operation. If kept up in a stall, the animal accustomed to regular exertion quickly becomes plethoric, and thus his great powers of digestion and assimilation conduce to unhealthy rather than healthy action in the wound. If such an animal must stand in the stable after the operation, his fine condition will be rather prejudicial, and should be reduced somewhat by a dose of physic prior to the operation, and a restricted diet after. A very fat animal may be advantageously treated in the same way. The very poor are liable to have the healing process retarded, and to have a low type of inflammation in the wound, with extensive swelling, gangrene, or inflammation of the lining membrane of the abdomen, or, in less redoubtable cases, local abscess, or tumor of the cord. These should have their condition improved before they are castrated.

No male should be castrated until it has been ascertained whether there is any hernia (rupture) into the scrotum. The sack of the scrotum should contain nothing besides the testicle.

Any descent of abdominal organ may be felt at the front and sides of the testicle, and the thickening will be continued upward beside the cord into the abdomen. If pressed, it will return slowly at first, and then suddenly and completely.

Such subjects should be left to the veterinarian for a special operation.—*National Live-Stock Journal, Chicago.*

Heifers from the best milkers.

We think all the best dairymen are agreed in regard to the profit of raising their own cows to supply additions to their herds. Very few have ever selected a valuable herd wholly by purchase. It has been said that if total depravity can ever be alleged against a farmer, it will be found in his representations on the sale of cows. We have often enumerated the important points in favor of home-raised cows; and one of the most important is the opportunity of selecting the heifer calves from the best milkers, both for quantity and quality.

If the dairyman gives no heed to this point, he will perpetuate his worthless cows with his good ones, and thus never improve his dairy herd. A large majority of dairymen have cows in their herds that do not pay their keeping; and as