

HORSES AND CATTLE.

CARE OF BROOD MARES WHILE IN FOAL.

To bestow some care in the selection of the food for mares with foal will be worth the farmer's while. There can be no doubt that the chance of obtaining a good foal is in a very high degree increased by the certainty that the food of the mother, during her pregnancy, has been all that it ought to be in point of quality and quantity. It appears to be established that any, even very temporary, failure in the quality or quantity of the food of the mother, at any period of her pregnancy, during the many complicated changes incident to the body of the foal in its development, proves the source of some one or another defect in the organization of the foal throughout life, and, therefore, perhaps of some serious vice in its permanent constitution. Too much care, therefore, cannot be bestowed to avert any failure of this kind that may be attended with a consequence so serious.

The materials out of which the body of the foal is constructed are altogether drawn from the blood of the mare. The food therefore allowed to the mare during pregnancy must be sufficient, not only to maintain her blood in a state adequate to supply the ordinary wants of her own system, but also to bear the additional drain put upon it for the development of the various textures entering into the structural composition of the offspring which she carries in her womb.

To determine theoretically what addition should be made to the ordinary food of the mother, in order to enable her to bring the work of reproduction to a perfectly successful termination, it would be necessary to institute a comparison between the quantity and kind of material required for the repair of the periodical loss in the substance of the mother's body, under the amount of work obtained from her, with the quantity and kind of material adequate at each particular type of pregnancy, to produce the development of the foetus in the like periods. It cannot be assumed in theory that a mere increase of the ordinary kind of food will suffice to supply all that the foetal foal requires for its perfect development, for that assumption would imply that the textures in the mother which are undergoing waste by labour must, throughout pregnancy, be the same, or of the same composition, as those which are, at the same period acquiring development in her offspring within the womb.

Physiological chemistry has not yet reduced to an exact measure, fit to be expressed in figures, the precise additions to be made to the food of such an animal as the mare during the successive stages of her pregnancy, in order to insure the perfect development of the foal. Nevertheless, there are some considerations that may not be without their use towards the attainment of this object. It is, however, necessary to remark that a strict attention to the food of breeding mares should not supersede a regard to the other circumstances that are conceived to exert an influence in the production of what is called a hit, or signal instance of success, in obtaining a perfect foal, and the farmer should pay attention to the kind of mare he is to breed from, as well as to the merits of the stallion of which he makes choice.

The pregnancy of the mare lasts for eleven months, and during all this period there is a drain on the mother to supply the materials necessary for the development of the frame of the foal. In the early stage of her pregnancy, the drain is, of course very small, but it grows greater as the pregnancy advances. How mysterious soever may be the connection between the blood of the foetus in the placenta, it is certain that the

development of the bodily frame of the foal takes place exclusively at the expense of the blood of the mother. Thus there is no room for doubt that the blood of the mother during pregnancy, when proper food is supplied, undergoes changes of a kind to fit it to afford, at each succeeding stage, such materials as the exigencies of development in the foetus at that stage requires. The only well-marked change that has been observed on the blood in mammals during pregnancy is an increase in the proportion of fibrine. This has long been known, as respects the human race, by the fact that blood drawn from a vein during pregnancy uniformly shows the same buffy coat, composed of fibrine, which is present in blood drawn during acute inflammation. The presence of fibrine in large proportion in the blood during pregnancy implies the simultaneous accession of sulphur and phosphorus in corresponding proportion. Though it is by no means a settled point in physiology, we may in the meantime take it for granted that a larger amount of food affording fibrine, and by consequence, sulphur and phosphorus, is required by the breeding mare than by the same mare when merely employed in ordinary farm or other work. The distinction between vegetable fibrine and vegetable albumen cannot always be drawn in the analysis of the grasses and other articles of food fit for the animals of the farm. This distinction is, however, very manifest in the seeds of the cerealia or grain-grasses; thus the gluten, as it is termed, of wheat consists essentially of fibrine. All the ordinary prized forage grasses, and the artificial grasses, contain, most probably, in sufficient proportion, mineral simples required for the development of the foetus.—*Thoroughbred Stock Journal*.

POLLED ANGUS OR ABERDEEN CATTLE.

An English journal states that formerly, both in Angus and Aberdeen, the breed embraced a variety of colours as well as a difference in size. Black, with some white spots on the underline, was the prevailing colour. Some were brindled—dark, red and black stripes alternately, others were red, others brown, and a few what Youatt called "silvered coloured yellow." But since systematic improvement was commenced in thorough earnest, all shades of colour except black have been at a discount. It is not easy, however, to wholly obliterate features that have at any time been characteristic of a race of stock, and even in the "best granulated families" a "reversion" to one or other of these unpopular shades of colour still occasionally displays itself. A shade of brown is not rejected, and not a few of the best looking and highly priced animals of recent years have had some white about the underline, chiefly around the udder. Red or brindled, however, are wholly inadmissible; and when animals of these shades do appear they are not bred from. In most herds one or two red calves have appeared, but a brindle calf is now rarely dropped. But while these colours are unpopular, it should be remembered that they do not denote impurity. They simply indicate that an ancient characteristic of the breed, which modern fancy has doomed to extinction, has, in the mysterious workings of nature, been able to temporarily reassert itself.

From the earliest accounts of the Angus and Aberdeen polls, it would seem that they were even then noted for symmetry of form, and that most of them were small in size. They were generally so small in fact, that oxen of the breed were not considered suitable for the ordinary light farm work of a hundred years ago. It would seem also that they have always been thick, low-set, round, very compact, fine in the bone, with soft hair, mellow skin, rich cover of flesh, fine

head, hardy constitution, and great aptitude to fatten, their beef being of the finest quality, and beautifully mixed. The polled Aberdeen or Angus cattle of to-day are just magnificent animals of the same time. Most of the good points they formally possessed have been still further developed and brought to a higher condition of usefulness; while some defects that characterized the breed a hundred years ago have been wholly or partially removed. There has been a very great improvement in size during the present century. They are now large cattle—scarcely inferior, indeed, in weight to any other variety in the country. At a casual glance they seem decidedly smaller than average Shorthorns; but on closer examination or on the "scales" the difference is generally found to be much less than had at first sight been supposed, and often disappears altogether. As a rule, polled animals are lower set or thicker and more compact than average Shorthorns—the latter being more "pointy" and longer in the legs.—*Herd and Farm*.

CARE OF FARM HORSES.

Successful farming is next to impossible with the use of inferior horses. Even when the best animals are secured skill and care are required to maintain them in proper working condition. Inefficient team help increases the cost of almost every farm operation, and makes high-priced labour still more expensive by diminishing its effectiveness. With careful but liberal feeding, and thorough grooming, a good team of horses should thrive even after performing a good day's work every working day in the year. In some avocations men work every day through the year with the exception of Sundays, and, though this may not be the best practice for men and women, yet it is because of a finer nervous organization, which is not presumed to be an impediment in case of the average work horse. Muscular weariness alone is relieved by regular rest at night, and also that of one day in seven set apart for that wise purpose. In the care of the horse, if the grooming be faithfully performed, it goes far towards resting the tired muscles after a hard day's work. We have in mind a most careful horse owner, who is accustomed every night to thoroughly rub and brush the wearied muscles of his team of horses. From the fresh and lively appearance of his horses and their disposition to work, we fancy this grooming is quite as important a factor in the well-being of his team as the grain which is fed to them. These horses have not been fed heavily, yet, from spring until fall, working every day excepting Sundays, the team continues to improve.

The mistake commonly made by farmers is in giving their horses too little grain in winter, or when not working, and then overloading the animals' stomachs when heavy work has to be accomplished. Grain thus fed not only fails to strengthen but also absolutely weakens. It is really a tax on the digestive organs, to which they are not accustomed, and are therefore unable to bear. Every person knows, or lucky indeed is he who does not, the sudden weakness which almost invariably accompanies any derangement of the digestive organs. The same is true in case of a horse, and such a derangement generally follows any sudden increase in food just as hard work begins. In fact, sudden changes of food in kind as well as in amount should as far as possible be avoided.

A certain but moderate proportion of green food should form part of the daily ration for horses in winter as well as summer. At no time, however, should a working team be allowed to fill itself with grass to the exclusion of more substantial food. One feed of carrots daily through