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FEEDING AND CARE OF HORSES.

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FEEDING AND CARE OF HORSES.

STALLIONS, BREEDING MARES, YOUNG HORSES AND WORK HORSES.

(By E. A. Trowbridge, Instructor in Animal Husbandry, University of Missouri.)

The growing demand for high class horses and mules of any of the recognized market types has placed the production of these animals among the list of profitable enterprises on the American farm. Present prices, regulated by supply and demand, do not seem to indicate a decreasing profit from this business. The relative profit accruing from this class of animals as compared with cattle or other live stock on the farm is a good argument for its importance. The percentage of good horses in this country, today, is greater than ever before, yet there is considerable room for improvement. There are many common errors made in the care of various classes of horses with the idea of economy in view. It is, however, poor economy to starve a growing horse to save feed, for there is no other class of animals on the farm that will return bigger profits, if properly fed and developed than good horses. Farm work is not so hard but that most of it can be performed by either brood mares or horses, and mules that are too young to sell to the best advantage. For this reason the farm should be the place of production and development of even more high class horses and mules in the future than it is at the present.

The care and food accorded to the various classes of animals differs considerably, not only with the class of animals, but with the object in view. We find horses differing from other classes of animals as to their general character, their digestive apparatus as well as in the object of production. The object of production in the case of horses is their future ability to work and wear for as long a time as possible, while that of beef cattle, for example, is the fat steer in his yearling, two-year old, or three-year old form. Consequently there should be some difference between the ration of the growing gelding and the rapidly fattening steer.



Fig. 1. Pure bred Percheron mares, Argentine and Nettie (in foal). Weight, 3,700 pounds. Owned by University of Missouri. (Photo taken February 8, 1908.)



Fig. 2. Pure bred Percheron mares, Argentine and Nettie, and foals. (Photo taken March 21, 1908.) Both mares worked to ten days before foaling.

It is true that the breeding animals of the various classes require much the same care and feed. Although the rations may differ as to the kind and amount of hay and grain, their fundamental composition differ very little from each other.

The growing animal to develop best must have food which supplies muscle and bone-building material, such as wheat-bran, oats, middlings, alfalfa and clover. The fattening animal needs only enough of these to replenish the body waste, but which, if it is not supplied, greatly decreases the ability of an animal to gain. The bulk, then, of the fattening ration should be of foods which produce fat.

Breeding animals need a ration rather similar to that of growing animals. For the greater part of the time breeding females are nourishing young either in foetus or after birth, while males must be healthy and vigorous, and not over fat. Their ration should produce, not high flesh but rather muscle, energy and vigor.

CARE OF STALLIONS.

The proper care of stallions does not differ materially from the care of other breeding animals. Enough of good wholesome food and water, plenty of exercise, grooming and general cleanliness, along with regular attention, are the principal factors requisite to their best welfare. Many stallions fail to be "sure" sires simply because of lack of exercise or an overgenerous allowance of poor food, two factors which, acting together, cannot lead to the best results. The swollen or scurvy legs so often seen on stallions are generally the result of insufficient exercise and lack of cleanliness.

Generally speaking, there is no good reason why a stallion should not be put to work. Such treatment insures regular feeding, grooming, exercise, and will give him the privilege of association with other horses. It will do away with the solitary confinement and irregular attention of which he is otherwise the recipient.

If, under ordinary conditions, at the close of the breeding season a stallion is pressed into regular service and accustomed to work gradually, he will be the better for it in the end. Association with other horses will then come to be a regular occurrence, and the obnoxious actions so common to stallions in harness will become less frequent. As a horse in regular service he then receives regular care and exercise. If he be from any of the lighter breeds as saddler or trotter it is by no means advisable to use him for a kind of work for which he was never intended. It is not conducive to

the best development of horses to force them to do work foreign to their breeding and general character. For example, the high class carriage team may be used for farm work and serve the purpose well, but by this treatment their value as carriage horses is in most cases decreased.

If conditions are such that a stallion cannot be worked, a large paddock offers the next best opportunity for exercise. In building such a paddock it is economy to build it substantial, so that there will be no possible chance for injury to the animals. The difficulty encountered in such a method is that horses, particularly drafters, will not take enough exercise of their own free will.

Oats should constitute the basis of the grain ration for stallions. The efficiency of this grain may, in many cases, be increased by the addition of one-fifth or one-sixth bran. A limited quantity of corn makes the ration a more economical one, and may be added without injury if plenty of exercise is to be had. Roots of various sorts are palatable and succulent and often improve the stallion's allowance. Barley has been successfully used as a part of the grain ration. Some complaint has been made against the use of linseed oilmeal, and the writer would not advise its use, except in limited quantities. Good sound oats with a small portion of bran make the best grain ration for stallions.

Whatever hay is fed must be clean and well cured. Timothy and clover, a major portion of the former, has proven to be a very satisfactory hay ration. Alfalfa in large quantities as a stallion feed has been criticized, the objection being that it lessens the ability of a stallion to "settle" his mares. Corn fodder has been found to be inefficient. It contains too much crude fibre. Existing conditions will determine the quantity of both hay and grain which should be fed. A safe basis upon which to proceed is to feed one pound of grain and one pound of hay per hundred pounds of live weight. The amount should be sufficient to keep the horse in vigorous and healthy condition, yet not fat and lazy. To maintain this condition, the grain and hay will vary from the above given standard with different individuals.

If a stallion has been worked during the year, he will be in shape to start the season as it approaches. If he has not been worked, he should have had sufficient exercise, feed, and grooming to have kept him in a vigorous condition. If he is to travel, the problem of exercise is solved; if not, an eight or ten-mile drive daily will be sufficient exercise.

At all seasons of the year the stallion should be well groomed,

and have a light, clean, dry and well ventilated stable. Lack of attention to these details causes skin diseases and various other troubles of more or less serious nature.

To sum up the cardinal principles in the success of caring for a stallion, plenty of good, clean food and water, enough exercise and grooming, along with a comfortable place to sleep, will, under ordinary conditions, give very satisfactory results.

CARE OF BREEDING MARES AND FOALS.

The principles governing the care of mares are identical with those governing the care of stallions but the customary treatment differs greatly. On the average farm the problem of enough exercise is not troublesome. The great difficulty is to find help that will handle a pair of broodmares carefully. Mares carrying foals may work up to within ten days of the date of foaling, and be benefited by it. They should be given moderate but steady work. Mares in foal should not be given work which requires the backing of heavy loads, or where there is a chance of slipping. But breeding mares can and should be worked. The accompanying illustration is that of a pair of mares owned by the University of Missouri, and a regular work team on the University farm.

The food for brood mares should be similar to that of the stallion. Good oats, four parts, and bran one part, along with mixed clover and timothy hay which has been well cured makes an excellent ration. The rule of one pound of grain and one pound of hay to every one hundred pounds live weight is again a good basis to work upon, along with the variation according to the individual. As the period of pregnancy advances, the ration will in most cases need to be increased, somewhat. During pregnancy particular attention should be given to the digestive apparatus of mares. They should be gaining in condition, and bowels loose at the time of parturition. It is always a good plan to feed rather sparingly for two or three days before parturition, and the ration, at that time, should consist largely of bran. After parturition it should be increased to suit the needs of the mare and foal.

Mares should be given a box stall at least four weeks before they are due to foal, in order that they become accustomed to it, and may also have a place large enough to be comfortable during the night. The stall should at all times be kept clean and well bedded, but particular care should be taken regarding these details at the time of parturition. If truly known the source of navel trouble in foals is generally due to a dirty stable or yard. As a

safeguard against "navel disease," besides the scrupulously clean stall, the navel should be tied and treated with a strong disinfectant, such as a solution of carbolic acid.

If the season of the year and other existing conditions permit, mares may well be allowed to foal on grass which lessens the danger of infection.

In developing the youngsters, the first question to be settled is "when to start feeding them." The answer to this question varies with the conditions. If the foal comes in the spring it may do well, without grain for the earlier part of the season, provided the mother is a "free milker," not required as a regular work horse

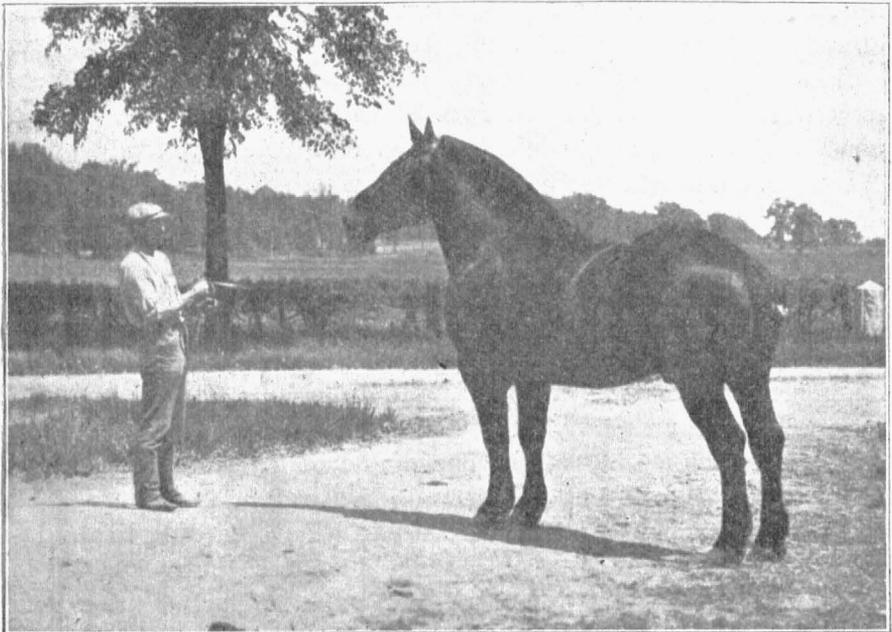


Fig. 3. Percheron stallion Pink, 24756 (47513). Twice champion at the International Live Stock Exposition, and now successful sire at Oaklawn Farm, Wayne, Illinois. Owned by Dunham & Fletcher.

and allowed the run of a good pasture of bluegrass or clover and timothy. However, a small grain ration for both mare and foal will aid materially in the development of the latter. The foals should be given a chance to learn to eat grain before the season of poor pastures, for the scant supply of grass and milk must be supplemented by grain.

If there is only a small number of mares, say three or four, in the pasture, the feed boxes may be arranged far enough apart to

prevent any fighting. If the number of mares is larger, or there are horses in the pasture for which the increased ration is not desired, then the mares should be "taken up" to be fed. It is here that the foal will learn to eat. It has learned to eat grass by running in the pasture with its mother, and will soon learn to nibble grain from the feed box, if given the chance. At first only a small amount of grain will be required to satisfy its appetite, but very soon an extra allowance must be made. This should be gradually increased until weaning time.

Now, if it is necessary for the mare to work while suckling her foal, the proposition will be somewhat different. Having had two or three weeks' rest after foaling, she may be put back into the harness, at first working only at light work, and for a half day at a time. The foal should be allowed to nurse once in the middle of the half day for the first week. While the mare is at work it should be left in a roomy, clean and well lighted stall or paddock, where there is absolutely no chance for it to injure itself. If possible, two or more foals should be kept in the paddock together where they soon become acquainted and are much company for one another. Great care should be taken not to let the foal nurse while the mare is too warm. She should be milked nearly dry on coming to the stable, left to eat hay until cool enough for a drink of water, then taken to her own stall to eat her grain and to allow the foal to suckle. Either too much milk at one time, or milk from the dam when in heated condition, may lead to serious results. The foal will learn to eat in a very short time, and when left alone, should have sweet, fresh grain and a bucket of fresh water always in the stall. The mare should soon be able to work all day, and both she and her offspring will become accustomed to this routine. The grain allowance should be made ample for both of them until weaning time.

"What to feed" is the next question for consideration, and a very important one. The food given should be of such a character as to supply material for the making of bone and muscle. It is not fat that we desire in the young horse, but rather growth—that is, development of frame and muscle throughout.

As yet oats is recognized as the standard horse feed the country over and should constitute the basis of the ration for both the foal and the mare. As a ration upon which to start foals crushed oats and bran mixed together with a very little salt will be satisfactory. As the foal grows the crushed oats may be changed for whole oats and a small amount of ground corn added. A ration of

corn and oats, one-half each by weight, does well, but the bran helps regulate the digestion. They relish the whole oats, as will be evidenced by the fact that the bran is frequently found remaining after the oats have been eaten. The only objection to whole oats for young foals is that they are not as easily digested as crushed oats. If the mares and foals are running on pasture there will be no need of roughage, but if they are kept up a very little green feed, clover or alfalfa hay put where the foal can eat it at their leisure will be helpful.

Then until weaning time oats, bran, corn, grass and mother's milk constitute a very efficient ration. The corn may be omitted entirely without depreciating the value of the ration, but its comparatively low cost warrants its limited use.

The amount of feed is a question which needs very little discussion. Grain in the before-mentioned proportions, placed where the foal may eat at will, has been found to give satisfactory results. Even while suckling they will learn to eat 3 pounds or more of the mixture per day. The grain should be changed twice a day in order to prevent scouring.

Any time between five and eight months of age will be a suitable time for weaning. A very successful method is as follows:

Take a foal away from the mare and, if possible, put two or three of them together in a light, clean, and roomy box stall. Place the accustomed grain and hay ration before them. Keep the mare far enough away from the foal so that neither may see or hear the other, and within three or four days they will have practically forgotten their former relation. In many cases, weaning may be accomplished without any noticeable loss in weight on the part of the foal.

GROWING HORSES.

After weaning, plenty of good grain and hay should be fed to the foals. The food should be of such a character as to produce the greatest growth of bone and muscle and to keep the weanlings in a thrifty condition. Oats, bran and corn, one-third each by weight, has been found to be a very successful ration for growing horses. As a roughage to be fed with this grain, alfalfa or clover, with a limited quantity of oat straw or corn stover, gives good results. Timothy and clover, about one-half each, will also be found a very successful adjunct to the above-mentioned grain ration. An error commonly made is that of feeding corn fodder and timothy hay with nothing else. This ration does not supply the proper amount

of protein for growing horses. It does not keep the digestive apparatus in good working order, and is the cause of poor condition and stunted growth in many cases. Exercise during the winter is a necessity.

To pasture through the summer is not only a cheap but highly efficient method of developing young horses. During the early part of the season, while the grass is good, no grain will be necessary, but when the dry and sparse pastures of August and September come on horses should have grain. Oats and corn, one-half each, on bluegrass or clover and timothy pasture, keeps up their health and thrift. At this season of the year a shed in which the horses may seek protection from the sun and flies is a material advantage.

In short, both through winter and summer growing horses should have plenty of good food, water and exercise to produce the maximum development.

WORK HORSES.

Work horses on the average farm are for the greater part brood mares. The care and management of this class of horses has been previously discussed, so need not be mentioned here. The animals which deserve attention in this connection are the horses not used for breeding purposes and mules. Economy is a great factor in caring for these animals, and should be considered carefully so long as it does not interfere with their working capacity or health.

The kind and amount of work to be performed will have considerable weight in fixing the ration to be fed. During the summer, which is the season of hardest work on the farm, a ration of the highest possible efficiency is practical. It should consist of a comparatively large proportion of concentrates. For horses doing farm work corn and oats, half and half, is an efficient grain ration when fed with timothy and clover used as a roughage. Corn and bran, one-half each, gives good results, and may be used when oats are not available. Alfalfa in limited quantity may be fed to horses doing ordinary farm work, but should be fed in connection with timothy. For light horses doing road work corn must be fed in very limited quantities. Roadsters and drivers do very well on a ration of five parts oats, one part bran, and timothy hay. The proportion of hay fed should be comparatively small.

During the winter when there is not much work to be done about the farm, the ration for work horses may be materially decreased. "Roughing" horses through the winter has come to be a

common practice. To be kept through the winter in this way horses should be given a shed for shelter, preferably one opening to the south. As a feed it was found at the Utah Experiment Station that alfalfa alone was sufficient for maintenance. Well cured clover hay with some corn fodder (stalk and ears) may be used, but a small amount of grain is advisable. Timothy hay, and corn stover is not a satisfactory ration for "roughing" horses through the winter. They need more protein, which may well be supplied in the form of some leguminous crop. Horses that have been treated in this way should be given grain and exercise at least six weeks before being put to work.