

of its doing farm work, for if you give a life colt into the hands of a hired teamster nowadays, it will not be long until it is a spoiled colt.

Finally, when I started figuring the cost of raising and training blood colts, and the careful handling required to bring them to a marketable stage. I concluded we farmers were making a great mistake in trying to raise this class of horses, and decided to dispose of my stock. The prices received ran from fifty to one hundred and fifty dollars for horses from three years old up. I leave the reader to conclude how much profit was left for the breeder.

We then purchased two pure-bred Clydesdale mares, and commenced raising colts from them, for which we found ready sale at from two hundred dollars for yearlings, to six hundred dollars for three-year-olds.

There is a good demand for any sort of heavy horses to-day. Even grade colts of a heavy type at six months old will bring as much as seventy-five dollars. Being so easily raised, there is little risk in buying them young. Every spring, carloads of heavy horses are bought up for shipment to the Canadian West. Any ordinarily good heavy horse brings a high figure then, because such horses are a necessity in breaking up prairie soil.

Although my experiment with blood horses proved a temporary loss, it was a profitable mistake, because I am now contented raising heavy horses at a good profit to myself.

Wright Co., Que.

W. H. STEWART.

[Note.—This article was entered in our competition, and while not winning a prize, is well written, and offers some good suggestions to farmer horse-breeders.—Editor.]

The Economic Wintering of Idle Horses.

At this season of the year, the economic wintering of idle horses is of first importance. This is emphasized by the high price of foods this winter. Because of this high cost, a few of us err by turning our horses out to rough it through the winter, feeding on cornstalks, straw and the like, thus often inducing "straw colic," while by far the greater number of us make the mistake of denying our horses sufficient exercise, keeping them too closely confined in the stable, and overfeeding on grain and rich hays. This method is as likely to produce disease as the former, though of another kind.

WINTERING THE IDLE WORK HORSE.

In the wintering of the idle horse there are two factors that must be kept constantly in mind: the supplying of sufficient nutrients to keep the horse in condition, and the permitting of an abundance of exercise. It is more economical, and perhaps advisable, to turn the idle horse into a lot, providing it affords good protection, as a shed open to the south, to be carried through the winter, rather than to confine him too closely in the barn. This affords the horse an opportunity to have the much-needed exercise. As winter comes on, the horse grows a heavy coat of hair, which will afford excellent protection.

The amount of food to feed will depend on the kind. If the hay consists of good timothy, or of sweet, clean clover or alfalfa, the amount and kind of grain will vary considerably from what would be necessary to maintain the horse if straw or cornstalks constituted the roughage. Thus, if clean timothy, clover or alfalfa is used, five pounds of grain—two in the morning, and three at night, per 1,000 pounds live weight, will usually prove sufficient. If timothy is used, it should be fed ad lib., though it may be necessary to limit the clover or alfalfa, particularly if the horses have a tendency to gorge themselves. On the other hand, if the roughage consists of very coarse materials, as straw, cornstalks, and the like, then it may be necessary to increase the grain, perhaps to six or eight pounds per thousand pounds live weight.

For best results, the grain may consist of half oats and half corn, by weight, ground together, though one may use such foods as are available. While, as a rule, corn is not considered a very good horse food, it is less objectionable if fed in the winter, as the horse needs much heat-producing food.

It is better to have the digestive tract of the idle horse well distended with hays, rather than contracted, as would be the case if grains possessing only the requisite nutrient were supplied. If the protected area is kept dry and well bedded, the horse can be comfortably wintered in this way at much less expense than by stabling. Full grain feeding, together with some work, should begin six weeks before spring work starts, to put the horse in condition for the spring work.

The drinking water should receive attention. Often this is entirely neglected, and the horse must drink ice-water or eat snow to get the needed water. Such neglect often produces disease. It is important to provide the idle horse with sufficient water from which the icy chill has been removed.

WINTERING THE BROOD MARE.

The brood mare will require more attention. While in general the care may be much the same as that outlined above, yet it should vary considerably in detail. Thus, the mare should be permitted to take exercise by having the run of a lot, and this is even more important than in the idle horse; but she should not be allowed to travel over icy or slippery ground. Her quarters should be more comfortable, a box stall prepared, and it is of greater importance that she be not required to drink ice-water, eat frosted, frozen, mouldy or ergoted foods, as these are likely to produce abortion. The mare in foal should be fed much as suggested above, with the addition of more protein foods, such as bran, peas and oil meals, as such foods rich in protein and mineral matter are valuable for mares carrying young foals. A grain ration consisting of five parts ground oats, two parts bran, two parts corn meal, and one part linseed oil meal, by weight, will be difficult to improve upon in most cases. This may be fed in quantities such as suggested above. If the mare is constipated, bran mash may be given occasionally. On the other hand, if she is laxative, it will be necessary to reduce the bran and oil meal, particularly if clover or alfalfa constitutes the roughage. Through the use of the proper foods, the bowels should be kept in the proper condition. If available, it is a good plan to feed a few carrots to the mare in foal, as these have a good physical effect. The brood mare cared for in this way will take sufficient exercise, and not become too fat or too much reduced in flesh, and thus avoid troubles at parturition time and subsequently.

WINTERING THE COLT.

As a rule, the first winter is very severe on the young colt. This is due to improper methods of weaning, or, rather, to poor methods of caring for the colt while suckling the dam. As soon as the colt is old enough, it should be encouraged to nibble at grain, preferably oatmeal. As a rule, he will begin to munch in the dam's grain box at two or three weeks of age. At this time the colt should be encouraged to eat by mixing a little sugar with oatmeal or bran and feeding to the youngster. It is a good plan to arrange a grain box for the colt's convenience, though some prefer to lower the dam's grain box so the colt can eat from the mother's supply. In this way the colt may be taught to eat, so that when taken from the dam at weaning time, he will not miss his mother, and may be put on his winter ration without loss in weight.

In choosing the ration for the growing colt, it is important that much protein be supplied, as this constituent is essential in the formation of bone; muscle, blood, nerve, hair and hoof. The food should be palatable and easily digested. Such foods as oats, bran, peas, linseed, and perhaps a little corn, may constitute the grain, while alfalfa, clover or mixed hays, which should always be fed sweet, may constitute the roughage.

The grain mixture suggested above for the brood mare cannot be materially improved upon for the growing colt. If this ration should prove too laxative, reduce the oil meal and perhaps the bran. On the other hand, should the colt seem constipated, a bran mash will prove beneficial. The exact amount of the mixture that should be fed will depend largely on the individual. On the

average, however, excellent results will be obtained by feeding the weanling four pounds of grain daily, and all the sweet clover, alfalfa or mixed hay he will consume, which will be from six to ten pounds each day, by feeding the yearling six pounds of grain daily and all the hay he will take, which will vary from twelve to fifteen pounds each day, and by feeding the two-year-old eight pounds of grain daily and all the hay he will consume, which will vary from fifteen to twenty pounds daily.

Many excellent horsemen prefer to feed the growing colt whole oats once a day, preferably in the morning, and the mixed grain at noon and night. For best results, the colt should be fed the grain ration three times daily, though many feed but twice, morning and night. Twice daily is frequent enough to feed the hay, morning and night. If available, a few carrots may be fed at this time, as they serve as a relish.

The growing colt should be permitted to take exercise as suggested for the brood mare. Colts should have rather warm quarters, for they cannot endure the inclement weather as mature horses. This had led many to confining the colt too closely in the stable. The colt needs abundant opportunity for exercise in the fresh, pure air, uncontaminated by stable odors, as this is essential to a healthy development. It is not sufficient that he be led out at intervals for exercise. He needs an opportunity to romp and play, that he may extend his muscles to their utmost capacity, expand his lungs to their depths, and send the blood coursing through his veins with much vigor. This is essential to a healthy, robust development of heart and lungs, bone and muscle, and nowhere can it be obtained in so great perfection as in the freedom of the open paddock or field.

COST OF WINTERING THE HORSE.

The cost of wintering the idle horse will depend on the kind and amount of foods used. At Cornell University, with foods at the market prices, we have been able to carry our work horses through the winter, much as suggested above, at a cost of less than 20 cents per day, while the brood mares have cost slightly more. This, of course, can be reduced somewhat by reducing the amount of grain fed. To carry a weanling colt through, as suggested above, will cost from 10 to 11 cents a day, or \$18 to \$20 for a six-month period; to carry a yearling colt will cost approximately 15 cents per day, or \$27 for a six-month period; and to carry a two-year-old through the winter will cost 18 cents per day, or \$32.40 for a six-month period. This includes the grain rations suggested above, which, of course, could be reduced by reducing the amount of grain, but we have thought it worth while because of the extra development obtained in the colts.

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Practical and Up-to-date.

I have been reading another agricultural paper for the past year, but I have decided to fall back to "The Farmer's Advocate," feeling convinced that it contains the most practical and up-to-date information of any journal published. Therefore, I consider it the cheapest paper for any farmer to read. Enclosed find remittance covering a year's subscription for myself and one new subscriber.

Perth Co., Ont.

G. A. HAMILTON.



Marmaduke.

Two-year-old Shorthorn steer. First in class and champion at Birmingham and Smithfield Shows, 1911. Exhibited by H. M. the King.