

prices have fallen in spite of the requirements of grain in old world centers.

This is the stage where the injustice of the situation develops. Because of the high price of money, prices for wheat have declined thus forcing the producer to take less for his grain than it is actually worth and this condition appears likely to remain until a large proportion of the crop has been marketed and the proceeds from it put into circulation. It is a fixed principle in economics that any commodity must bear the cost of its own distribution from producer to consumer and money being just as necessary to distribute wheat as cars and boats, it is obvious that the high charges for money will create a wide spread between American and European prices for wheat. The vicissitudes of the wheat-producing industry in Canada seem to be legion and would convince the superstitious that it was beset by some supernatural sinister agency. First, blockades at elevators, then car shortage, then lack of capacity on lake boats, and now the high price of money. One can scarcely guess what a commercial X-ray instrument might reveal if it could be turned upon the future of the wheat trade.

## HORSE

### Wintering Colts.

Colts are nondescripts, for the rearing of which no definite rules can be given, but common sense, patience and alertness should prevail. These awkward animals, utterly useless as yet, must nevertheless, be carefully looked after, the aim being to supply food liberally, with plenty of sunlight and an abundance of exercise. Oats lead to the list of feeding stuffs, but shorts and bran with barley may be profitably used where economy is important. These feeds, are rich in bone-making material and will be found satisfactory as well as economical. Colts suffer at times from teething, and to subsist wholly upon hard, dry food may work injury. Steamed crushed oats or barley, thickened with bran, will prove appetizing and very nourishing in such cases. Roots may be cooked and the mass extended with ground grain and bran. A limited quantity of this food given at night in the winter-time, daily, or two or three times a week, will show its effect in a better colt and a more thrifty general appearance.

Withholding coarse provender and giving concentrated grain in large quantities in its place at this period is to be deprecated, for it is important that the digestive tract be developed to a moderate extent by distention with coarse feed that it may serve its purpose when the animal is grown. The "big belly" which a properly-fed colt may carry at this period is nothing to its harm, even though it annoys the shortsighted stockman who foolishly may wish to see his growing colt the trim form of the finished product.

A fair allowance for the colt, measured in oats, is as follows,

Up to one year of age, from two to three pounds.

From one to two years of age, 4 to 5 pounds.

From two to three years of age, 7 to 8 pounds.

While an ample allowance of such roughage as hay, straw and stover should be supplied, it should always be less than the animal would eat had it free access to this provender.

The colt, like the mature horse, should not be allowed all the roughage it can consume, for such over-supply tends to gorge the digestive tract with inert matter, and may work lasting injury.

Liberal feeding must be counterbalanced by an abundance of outdoor exercise. In no other way can colts be ruined so surely and so permanently as by liberal feeding and close confinement. Each day from three to ten hours should be spent in the open air, according to the condition of the weather and other circumstances.

Prof. W. A. HENRY.

### Economical Methods of Winter Feeding.

Owing to the shortage and consequent high prices of mostly all varieties of stock food, in most, if not all sections of the Dominion, economy in wintering horses becomes an important matter with most owners. Horses that have to perform regular work, either heavy or light, must, of course, be fed as working horses demand, and notwithstanding the high prices of oats and hay, these must form the major part of the rations; but horses, either young or old, male or female, breeders or non-breeders, that are not to be called upon to perform regular work, may be kept in good condition on mixed rations, with only a percentage of the more expensive foods. All foods being high in price, we cannot expect to winter horses cheaply, but a little consideration and time in mixing foods will lessen the cost considerably. It must be understood that sudden or violent changes in food must not be made with any animal, as such is liable to cause digestive derangements, entail a veterinarian's bill, or probably cost the life of an animal, and thereby defeat its own object, viz., economy. For instance, horses that have been worked, and well fed on hay and oats, if when work ceases, the ration is suddenly changed to straw, roots, and a little grain or other mixtures, are very liable to suffer from indigestion or constipation in a few days after the change has been made. This danger exists in animals of all ages; hence, when there is to be a change made, it should be made gradually. The change from hay to straw should be gradual, by gradually reducing the hay ration and giving a little straw, the supply of hay being reduced and that of straw increased daily, until in ten days or two weeks a full straw ration can safely be given. The digestive organs of an animal become accustomed to performing certain functions or to digesting certain foods, and if a sudden change be made, even to foods that are, under ordinary circumstances, as easily or even more easily digested, the change is so sudden there is danger of disease. The same rule, of course, applies to all changes in all classes of stock, but probably more particularly to horses than to ruminants. In regard to weanlings, I do not think it is economy to limit the supply of the very best food that can be obtained. The first winter is a very important period of a colt's life, and his development and future usefulness to a very great degree, depend upon his care and thriftiness during this period. If through want of proper food or other causes he is not kept in a healthy, thrifty condition, he does not develop properly, and he will not make as good an animal as he would have under more favorable conditions, notwithstanding his treatment during the following years of his development. Hence, we consider that he should have all the good hay (well-saved clover preferred) and oats (rolled or chopped preferred) he will eat, and also a carrot or two or a turnip or mangel daily, with a feed of bran at least twice weekly, and all the salt and good water he will take. We think rolled oats better than whole, and also consider it is well to practically cook them by putting in a pail or other vessel,

pouring boiling water over them, then covering the vessel and allowing to stand for a few days before feeding. This treatment of the oats renders them more palatable and gives good results, and if the colts be turned out for a few hours every day, or in other ways be given regular exercise, there are very few cases in which there is danger of their eating too much. Our observations and experience have taught us that, with few exceptions, it is both safe and wise to allow weanlings all the oats they will eat, especially if treated as above, and the colt given regular exercise.

Colts over one year, idle or comparatively idle horses, brood mares and stallions, can be treated differently as regards food. Of course, horses that will be needed for work next spring, stallions that are needed for stud service, and brood mares nearing full terms of pregnancy, should be well fed on first-class food for a few weeks before these functions will be required.

During the winter months, a mixture of foods, many of which, if given alone would be neither palatable or satisfactory in results, can be given with reasonable satisfaction. Straw is generally of good quality this year, roots a fair crop, and in some sections corn a fair crop, fodder corn generally considered a suitable food for horses, a reasonable quantity can be used in a mixture of foods. In mixtures, of course, all food, as hay, straw and corn, should be cut, all grain chopped, and roots pulped. A mixture of, say, 1 part by bulk of pulped roots (turnips, mangels or carrots), 2 parts cut hay, and 4 parts cut straw (oat or wheat straw preferred, but barley may be used), with a quart of chopped oats or its equal in weight of other chopped grain, to about every one-half bushel of the mixture. Where bran is a reasonable price, the addition of as much as of the grain can be added with advantage. For the average-sized horse, a half bushel of this mixture three times daily should suffice and keep him in good condition, small or young animals being fed in proportion. In cold weather, sufficient of this mixture can be made to last three or four days. Experience will teach the feeder how long it will remain sweet. Of course, it must not be mixed in sufficient bulk to become too hot, nor allowed to stand long enough to ferment too much and become too sour. The length of time it will remain fit for food will depend largely upon the weather and the temperature of the compartment in which it is kept. Of course, it must not be allowed to freeze. When roots are absent, of course, the mixture must consist of cut hay and straw and chopped grain, in which case it is probably wise to moisten with water, in order to insure a more thorough mingling of the food. Sufficient moisture is supplied by the roots when present. It is good practise to vary the monotony of the ration by occasionally giving a light ration of whole hay or straw occasionally, but full feeds should not be given, as we must never forget the danger in making violent or sudden changes.

We might add that, where wheat chaff is procurable, it will give better results than cut straw.

"WHIP."



THE SCHOOL PONY AT THE EXHIBITION. "GEORDIE" Mutch, Lumsden, Exhibitor.