

little. So instead of feeding about 25 lbs. of hay and 12 lbs. of grain a day I tried them with about 18 lbs. of hay and 8 lbs. of grain (½ oats and ½ dried brewers grains) and 1 turnip a day each. Five horses out of six did not go back any whatever and the other one, not very much so I increased his feed about half of what I had cut off, and he started to pick up right away. They will start spring work this year in quite as good condition as in any former year and at a saving of more than 30 per cent. of the feed. By cutting down the feed the amount I did I cut out all the waste as the horses eat all their hay instead of eating some and getting the remainder under their feet. I think it better for the horses to cut the hay and mix the grain with it, then they cannot bolt the grain but have to eat it. If the hay is not cut, I always like to feed the horses a little hay at noon before feeding grain as during warm weather they often come in rather warm.

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Foaling Time.

As the general foaling time is now approaching pregnant mares should receive special attention. It should not be forgotten that a mare in the advanced stages of pregnancy has, in addition to sustaining herself, a nearly matured foetus to sustain, and as this calls largely upon her resources she should be fed and cared for accordingly. Her food should be plentiful of first-class quality, and of an easily-digested nature. She should be fed liberally on bran with a reasonable percentage of rolled oats in addition to good hay. A cupful of linseed meal and a couple of carrots or a mangel or turnip daily tend to aid digestion and prevent constipation, and, at the same time are relished. The too common practice of feeding solely on dry hay and oats, while giving fair results in working horses, is not by any means suitable for breeding mares. The bran and succulent food mentioned tend to keep the digestive organs normal, and also stimulate the lacteal apparatus to the desired activity.

While pregnant mares should receive some special care they should not be pampered and kept in idleness from the too common idea that sustaining themselves and their foetuses is sufficient labor. Ordinary driving or regular light farm work is much better than idleness. They should be given regular but gentle exercise or work. Of course, they should not be required to perform heavy labor that will entail excessive or muscular exertion, as there is danger of such producing abortion; but the mare that is kept in fair condition and regularly exercised during the whole period of pregnancy will, with few exceptions, produce a stronger foal than one that has been pampered and kept in idleness during the whole or greater part of that period. This applies particularly to the last few months of gestation. If it is not practicable to give her exercise in harness, she should be turned out in a yard or paddock for at least a few hours every day when the weather is not too rough nor the ground too slippery. Care should be taken to not let her out with strange or vicious horses that might worry or kick her, but some safe means of forcing regular exercise should be observed and continued until she shows symptoms of approaching parturition.

As the period of gestation varies in different animals and often in the same animal in different years, we cannot tell with reasonable certainty when parturition will take place. In round figures we say that eleven months is the average period, but observation and experience teaches us that this is by no means constant, and that the period varies from ten to thirteen months, and, in many cases, we may notice even a greater variance. Hence it is well to be prepared for the event at any time after the tenth month. After this period she should be kept in a large comfortable box stall, or if during the season when on grass, in a comfortable paddock where she can be closely watched. The box stall should have no mangers or feed boxes into which the foal may drop in case the act is performed while the mare is standing, as is sometimes the case. It is unsafe to allow a mare to foal while tied in a stall, as she is unable to give the foal the necessary attention, and it may perish from this cause, or, if it be a strong one and is able to rise and walk around without attention from either dam or man, it is as likely to walk into the stall of another horse as that of its dam, and, in its endeavor to obtain nourishment, is liable to be injured or killed.

The stall in which the mare is kept should be well cleaned daily, and it is good practice to sprinkle slacked lime on the floor each time before fresh straw is supplied. It is a mistake to allow manure, both solid and liquid, to accumulate, as it heats and vitiates the air, as well as favors the multiplication of microbes of different kinds. In support of this practice it is claimed that the presence of manure upon the floor prevents it becoming slippery, and thereby avoids accident to mare or foal that might otherwise occur, but we notice that if the stall be cleaned out

daily, and especially if lime be used as stated, it will not become dangerous in this respect. The lime performs a two-fold function—it keeps the floor dry, destroys and prevents odors, and destroys microbes, which, if present, are very liable to cause trouble in the foal. Probably the most dangerous of these microbes is that form which gains entrance to the circulation through the umbilical opening of the foal, and causes that serious and often fatal disease known as "Joint-ill or Navel-ill." In addition to this it is wise to give the whole stall a thorough sweeping and scrubbing with a hot 5 per cent. solution of crude carbolic acid or other disinfectant or all, but the floor a thorough coat of hot lime wash with 5 per cent. crude carbolic.

When the usual symptoms of approaching parturition appear the mare should be carefully watched. These symptoms usually are a more pendulous condition of the abdomen, an apparent shrinkage or dropping of the muscles of the croup, a fullness of the mammae and of the teats, at the points of which, in many cases, a small lump of inspissated colostrum, which is commonly called "wax" appears. There is usually also an enlargement of the lips of the vulva, and often a parting of the same with discharge of a small quantity of a viscid substance. It must, however, be remembered that in some cases symptoms are not well marked, and that in some cases a mare foals without having shown any well-marked symptoms indicating that parturition is about to take place, and in such cases we are surprised to find that birth has taken place in a normal manner, or else parturition is difficult and may have reached that stage in which the saving of the foal is out of the question, and the dam's life may also be in danger.

The immediate symptoms are, of course, the appearance of "labor pains." These are exhibited by an uneasiness, a nervous, excited state, espe-

Should Two-year Old Colts Work?

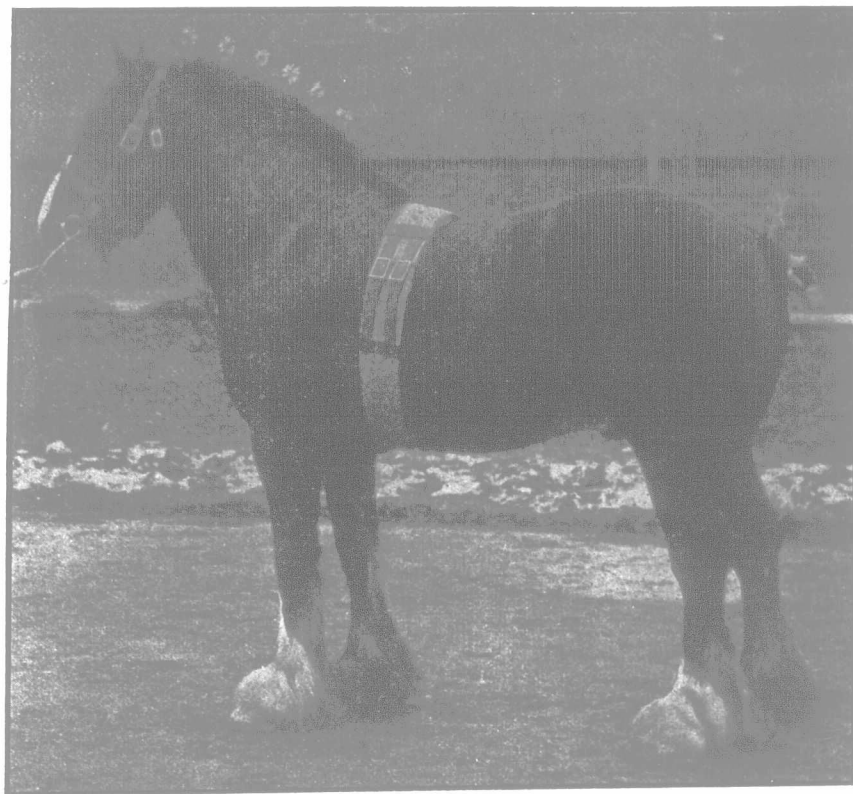
A colt is a colt and should always be treated, fed and cared for as such. At the age of two years he is not an old horse. He has much to learn, his development is only begun, and yet a little work, if he is well grown, should not injure him. It is generally advisable to accustom colts to harness the winter they are rising two so that in case they are needed to do a little light work during the rush of seeding or later they may be brought into service in collar without any great difficulty and without endangering the life of the driver or the usefulness of the colt. We have seen colts broken at two years, three years, four years and five years of age all of which made good, useful horses and did not seem to be injured in any way by breaking in at any age. It was clearly demonstrated however that the older the colt got the more difficult was the task of successfully training him to bring him into everyday service in harness.

Should a colt be broken or trained at two years of age? Yes, especially where it is possible by so doing to relieve the pressure on older horses, in-foal mares and teams of two horses doing the work of three. Of course if the colt for some reason is not well grown, has never done well due to disease, bad feeding or a slow development there are conditions under which it would not be advisable to put him to work at two years but this is the exception and not the rule. As a general thing on a well-organized farm only enough work horses are kept to do the farm work and seeding, harvesting and the Fall rush often sees the older horses put to it for all that is in them. This pulls them down in flesh and stamina and it is with difficulty they are brought up again to the best of working condition. The colt can fill a big gap under such conditions. He can

work half-a-day about with the in-foal mare or with the old horse getting on the shady side of his years of usefulness, and if not pushed too hard will himself show no ill effects of his efforts. In fact it will do him good if he is judiciously fed and well groomed. It must be remembered that while he will require more feed than when standing idle he will not stand as much as will the matured horse which has seen many seasons of hard work. When putting the colt to work, increase his grain ration carefully and feed according to size, age and work done.

Provided the colt has been hitched in the winter, after driving him around for a time in the team it is good practice to hitch to a plow. There is not so much danger of trouble as where the harrows are hitched to first and it is well to avoid heavy tongue implements with the two-year-old colt. He might do a little light drilling, but the cultivator or disk is rather heavy work and if he is put on these it should be as third or fourth horse and not on the tongue. The plow is a good starter. Filling dead furrows is nice, light work and an excellent beginning place. After hitching a few times, according to the disposition of the colt, he may be used with care wherever desired. Nothing will so impress upon him the duties of his kind as early training. Provided judgment is exercised and the colt is not overworked or spoiled by carelessness two years is just as safe a breaking age as three and no colt under normal conditions should go by three years without knowing what a stiff day's work means.

Breaking at four years is not advisable because in the first place it is too old to commence training and colts, under ordinary farm conditions where they are handled very little, are not so amenable to training as they get older. Also colts at this age usually have a very poor mouth four years being the critical age on account of teething troubles. While some hold that a colt develops better if left until four or five years before being brought into farm work the average farmer cannot afford to feed him to this age and get nothing out of him. It costs anywhere from \$75 to \$100 a year to feed a horse under present conditions and the sooner he is earning a part, all of or more than his keep the better. At five years the unbroken colt is generally obstinate and hard to manage whereas if taken at two years he is almost without exception docile and



Dunure Peer.

Best aged stallion at Glasgow, 1915.

cially noticed in primipara, (a mare producing her first young). The mare walks around the stall, stamps, lies down and usually strains. This is usually followed by a period of ease, which is succeeded by another attack. The attacks become more pronounced and severe, and the periods of ease shorter until the pains become almost or quite continuous. If in a field the patient usually seeks solitude by wandering away from other horses. In rare cases we notice what is called "false labor pains" in which the symptoms are reasonably well marked for a time, and then pass off to reappear in a variable time. In some cases parturition is completed in a few minutes after the first appearance of pain, while in others, even where everything is normal they continue for hours. The mare who is about to watch a mare during this period should be provided with a knife, a bottle containing a 5 per cent. solution of carbolic acid, in which is soaking a rather soft but strong cord, an 8 oz. bottle of water with 15 grains corrosive sublimate, and a pail or basin containing a quantity of antiseptic as a 5 per cent. solution of carbolic acid, Zenoleum or other coal tar product. There are many reasons why a mare about to bring forth young should be carefully watched. We will discuss these in a future issue. WHIP.

According to a parliamentary return at Ottawa up to February 1, 30,000 remounts had been purchased in Canada for the British Army and Allies.