

fields after harvest and are also secured from horse-manure along the roads.

Since the Vesper Sparrow lives almost exclusively in cultivated country and because it feeds out in the open fields; since it does no damage to agricultural products but on the other hand feeds on insects and weed-seed, it is one of the farmer's allies in the cause of "greatest production".

THE HORSE.

Make and Shape in Hackney Brood Mares.

EDITOR "THE FARMER'S ADVOCATE":

A question that one often hears in horse-breeding circles in England is one that relates to the sort of mare which is, by appearance, best suited for Hackney breeding, and upon few subjects do opinions appear to be more divided. On pattern, probably judges would not differ nearly so much as they do when they are called upon to give practical expression to their opinions, as the types selected for the leading position in the showing often differ very greatly. As an illustration of this the early champions at the London Hackney Show may be referred to, for no mares could well have been more unlike than Mr. Moore's Princess and Primrose on the one hand, and Mr. Robinson's Apology on the other; and yet the first and second named were respectively champion of the first and fourth shows, while Apology won at the second and third. The two former mares were of the long, low, massive type, while Apology was all quality without much bone. All were excellent in their way, but the question that had to be answered was, which was the better stamp for breeding purposes?

Probably nine experienced breeders out of ten would prefer the "old-fashioned," i. e., short-legged, powerful mare, which covers a great deal of ground and, by comparison with her opponent, conveys an impression of being plain. In all probability she is nothing of the sort, the appearance referred to being generally nothing but the result of the extra amount of substance which she possesses. Naturally a mare which measures well below the knee, which is heavy in her muscle all over and especially about the forearms, thighs and gaskins, which is well let down behind the forearms and which carries a big, roomy middle, cannot compare with the smart and elegant animal so far as her quality is concerned; and at the same time she is sure to appear less good-looking. In fact, one cannot possess a maximum of both substance and quality in any mare; it is the correct combination of both these virtues that makes for perfection.

The long, low, roomy type of mare is undoubtedly the superior from a structural point of view, for breeding purposes, as she can adapt herself better to her maternity duties and has more room for the foal. The elegant mare is as often as not too short-ribbed and tucked up to carry her foal as she should; and according to prevalent belief, which in this instance is worthy of consideration as it is based on experience, she is not likely to throw stock which have substance to recommend them. The theory that, as a rule, the dam gives substance to the foal is no doubt true, but in breeding matters as in others there are exceptions which often make it very difficult to prove its correctness in the course of argument. It is more probable, when a light-built, elegant brood mare has established a reputation for herself at the stud, that she is throwing back to a good stamp of ancestor or ancestors, rather than relying upon her own intrinsic merits; and hence her pedigree should be inquired into. Why some animals, horses and mares alike, should be in the habit of throwing back whilst their own brothers and sisters do not do so, is a matter that requires clearing up, but it does not seem likely that it ever will be.

It appears, therefore, that when judges have to award prizes in the brood-mare classes they are acting on the safest grounds when they rely upon the so-called old-fashioned type as being the more likely to produce the class of animal that is required. Admitting that the fashion of the day demands a more good-looking or flashy stamp of harness horse than that in demand a few years ago, it does not necessarily follow that the popular type is as well calculated to produce a replica of itself as the sire and dam from which it is sprung. On the contrary, and particularly so in the case of mares, there is a tendency to produce stock even lighter than themselves, and consequently there is always a danger bordering on the probable of a line of such dams producing stock that is absolutely weedy. The possibility of losing the old-fashioned stamp of Hackney brood mare, which, whatever her imperfections may have been, has had a great deal to do with making the breed what it is, is being increased by the importance that is being attached to quality. Quality is an extremely difficult expression to define when applied to a harness horse, and more especially when the breed is allied to a Thoroughbred. The quality of the blood horse is self-evident, but the ultra refinement of the race horse is surely not what is sought for in the roadster, as it must of a necessity be associated with lightness and a corresponding inability for heavy work.

Hence the importance of conserving the old-fashioned type of long, low, heavy-boned, roomy mares, one of which for breeding purposes is worth a lane full of animals only a degree removed from the park hack. The latter may be well enough in their proper place, which is not a harness brood-mare class; and it is as certain as anything in connection with horse breeding can be, that if this class of mare is constantly encouraged, the true type of Hackney must inevitably become extinct.

ALBION.

Cost of Horse-power on the Farm.

Horse-power costs at least 50 per cent. less per hour than man power. For this reason more and heavier horses must be used to replace the shortage of man power. Nevertheless, many farmers in Eastern Canada have retained fewer horses than usual owing to high cost of feeds. This is false economy in any year, and especially under present conditions.

The actual cost of horse-power is affected by the following factors:

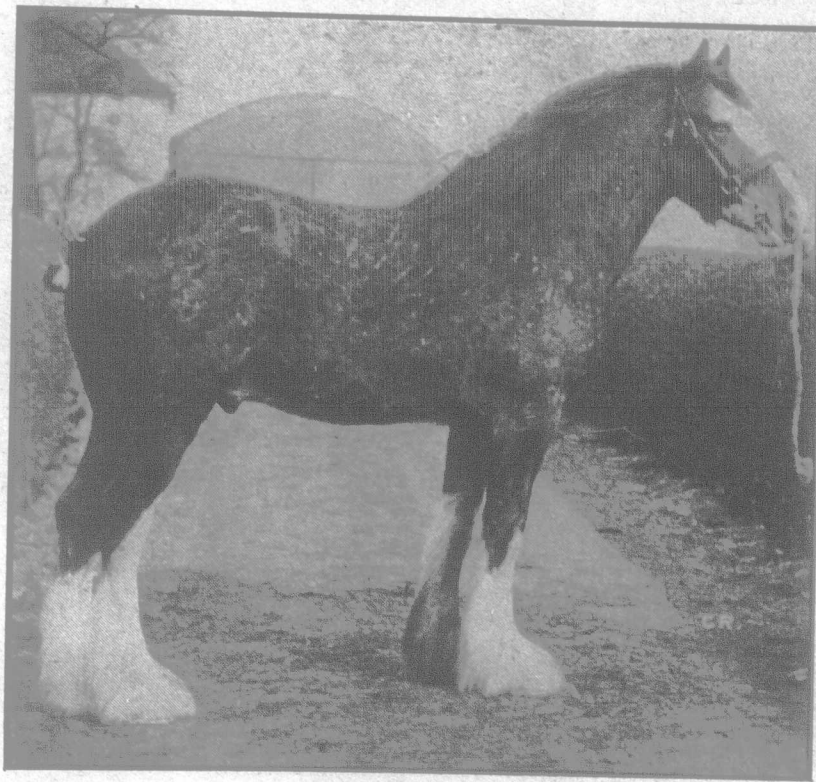
Weight, soundness and quality; distribution of labor over the year; condition and vitality; intelligent and careful handling; cost of feed; labor, interest on investment, etc.

The heavy horse of good quality gives the cheapest horse-power on the land. The horse properly fed and fitted for work will give much cheaper power than the underfed animal or one soft muscled and lacking in energy.

Although every farmer should have all the horse-power necessary, yet under existing conditions of feed and labor costs, horse labor should be so distributed and used to obtain maximum results at the lowest costs.

Every farmer should do a little careful figuring as to cost of horse-power, and consider well before allowing horses to run down in condition for want of feed and care or to unnecessarily stand idle in stable or field.

A large amount of data on cost of keeping horses has been collected on the Experimental Farms and from other sources in Eastern Canada, and the following statement may be considered as fairly representative for Eastern Canada, with such variations as are hereafter noted. This statement is for a horse weighing 1,600 pounds, working an average of 300 days per year. If the horses were idle during the winter months then the grain bill might be reduced 15 per cent. to 30 per cent., at present a saving of \$35 to \$60. Feeds are charged at about present market prices, but may be figured by the farmer to suit the local cost prices.



Craigie Litigant.

First prize three-year-old Clydesdale stallion and winner of the Cawdor Challenge Cup and Brydon shield, Glasgow, 1918.

Cost Maintaining 1,600-lb. Horse on Work for a Year.

I. Cost of feed:	
Oats, 6,050 lbs. at 90 cents per bus.....	\$160.20
Bran, 1,300 lbs. at \$35 per ton.....	22.75
Hay, 5,840 lbs. at \$12 per ton.....	33.04
II. Labor, including feeding, preparing feeds, cleaning harness, horse and stable.....	28.00
III. Interest on value of horse—5 per cent. on \$250.....	12.50
IV. Depreciation on value of horse per annum at 5 per cent.....	12.50
V. Interest and insurance on building (costing \$100 per horse) at 5 per cent. per annum.....	5.00
VI. Interest on harness and other equipment at 5 per cent.....	7.00
VII. Shoeing for average farm work.....	8.00
VIII. Veterinary, drugs, etc., per horse.....	5.10
Total cost maintenance on regular work.....	\$294.09

Whatever the reductions may be in cheap wintering of idle horses, there is no doubt that it will actually cost \$15 or more to maintain the horse during the six months starting May 1, 1918.

Cost of Horse-Power Per Hour.

The actual number of hours per year worked by the average draft horse on the farm in Eastern Canada varies from 1,500 to 2,500, depending on local conditions and the proper distribution of horse labor. The feed costs varying in the same proportion from \$155 per horse to \$216 per horse at present prices would show an

actual cost in feed along of $7\frac{1}{2}$ to $10\frac{1}{4}$ cents per hour or labor. The total maintenance cost in like proportion varying from \$230 to \$294 per horse would show an actual cost of $15\frac{1}{4}$ to $10\frac{1}{4}$ cents per hour of labor. In other words, the greater the number of hours worked per horse the cheaper is the horse labor per hour in spite of the greater feed and labor bills.

Cheapening Horse-Power on the Farm.

Briefly, the means of obtaining cheaper horse-power on the farm are:

- I. Heavier horses of better type and quality.
- II. Feeding carefully in proportion to work performed.
- III. Fitting for the extra heavy work of the year.
- IV. Working the farm with good brood mares and raising both spring and fall foals.

If this latter plan is carefully followed the mare may easily produce annually in foals the equivalent of 50 per cent. or more of her feed cost and still perform 1,500 hours or more of actual heavy labor, thus reducing by 15 to 40 per cent. the cost per hour of labor. The type and quality of the mare and, above all, the excellence of the stallion used, would determine the success or failure in this regard.—Experimental Farms Note.

Wounds—VII.

Frostbites—Burns—Scalds.

Frostbites.—The first effect of extreme cold is to diminish the vital action of the part with which it comes in contact. This state of depression when not too long continued, is succeeded by a more than ordinary activity, called a reaction, and if this alteration be often repeated the parts become permanently weakened, being slightly swollen, of a purple color, (which is well shown in horses with white skins) not so warm as usual, and afterwards becoming inflamed. The skin will now crack and discharge a semi-serous fluid. More intense cold not only weakens but entirely suspends vital action.

The parts become pale, insensible and shrivelled. The skin often sloughs from side to side, forming a strip of dead skin, underneath which is a deep chasm. The heels of the horse are more subject to frostbite than other parts. In some cases, especially during long-continued, snowy weather, with frequent thaws succeeded by sharp frosts, the deeper-seated tissues of the coronet lose their vitality, and deep and extensive sloughs are thrown off. The animal suffers acute pain, fever, and emaciation, and in rare cases succumbs or has to be destroyed.

Treatment consists in the application of hot poultices, but these must not be too long continued. As soon as the slough is thrown off, astringents as one ounce each of acetate of lead and sulphur of zinc to a pint of water should be freely and frequently applied. If the discharge be foetid, one-half ounce of carbolic acid should be added to the lotion. Constitutional treatment consists in administering a slight purgative, as six drams aloes and two drams ginger, good but easily digested food and, of course, rest.

Burns and Scalds.—These are divided into three classes, first, those producing mere redness; second, those causing the formation of small blisters; third, those causing death of the part. The first class is attended with mere superficial inflammation, usually terminating without loss of skin, though with temporary loss of hair. The second class is attended with a higher degree of inflammation, causing the skin to exude serum, and to form blisters, followed in some cases by suppuration and the formation of ulcers that are hard to heal. The third class is attended by mortification from disorganization of structure, the skin and underlying tissues being literally boiled or roasted, the blood coagulated in the vessels, hence the circulation in the part being completely arrested. In all cases of severe scalds or burns there is more or less supervening fever, manifested by shiverings, coldness of the skin and extremities, prostration and restlessness; frequent and feeble pulse, and heavy breathing. The surface of the scalded or burned part if destroyed will become pale, cold and leathery, the hair falling off in patches, leaving a denuded surface from which issues a thin, serous discharge. The parts now swell, and, in a few days a line of demarcation surrounds the dead part by the division of the healthy and the dead tissues; the chasm widens, the burned part contracts and dries, leaving a granulating surface exposed; the granulations are whitish, springy and moist. There is no discharge of pus, but of a thin matter, usually of a dirty, whitish color. The slough falls off, leaving a wound of greater or less magnitude (according to the extent of the burn) which is very slow to heal. It usually leaves a scar of a hard, dense, cartilaginous nature, which gradually contracts