

Weight in the draft horse is of great importance. It is of value because it helps to establish the value of the drafter on the market. The heavy drafters have for many years brought the most money. Also, weight is of value, for it holds the horse's feet firmly to the ground, enabling him to exert his physical force. The railroads have taken advantage of this in building the locomotive. In the early stages of the development of the locomotive, before it was introduced as a means of transportation, the inventor had a great deal of trouble in getting the engine started, for the wheels would not adhere to the rails. It was thought that there should be cogs on the wheels and rails. By accident, it is said, they found the solution. In attempting one day to move some material in sacks down the track, part of the sacks were placed across the engine. This added weight caused the wheels to grip the rails, and the difficulty was solved. The man who rides one of his horses up a difficult hill applies the same principle.

"The process of walking is a constant falling forwards, and the heavier the weight that falls against the collar the greater the pull.

"It has been clearly demonstrated that if a horse is required to exert for a considerable length of time a pull of more than one-tenth to one-eighth of his weight, it is wearing upon his constitutional vigor and therefore affects his usefulness. At the minimum requirement, a team of 1,800-pound horses would develop 3 horse power, but a team of 1,400-pound horses would only develop about 2 horse power.

"The form of draft horses must be such as to insure weight. The weight should be obtained by breadth and depth of body, and a heavy development of muscles on the arms and forearms, over the back and through the thighs. This heavy development of muscles helps to give the appearance of massiveness. The draft horse must give the impression of strength, a horse of great power. In order to be efficient drafters must carry their weight close to the ground, or, in other words, drafters must be low set. Too short a leg is as objectionable as too long a leg, as it affects the efficiency of a horse.

"Lack of depth of body, ranginess, openness, too great a length of leg, and lightness of muscling throughout the body are things to be criticised severely. These deficiencies detract from the weight and strength, and, therefore, affect the efficiency of the horse.

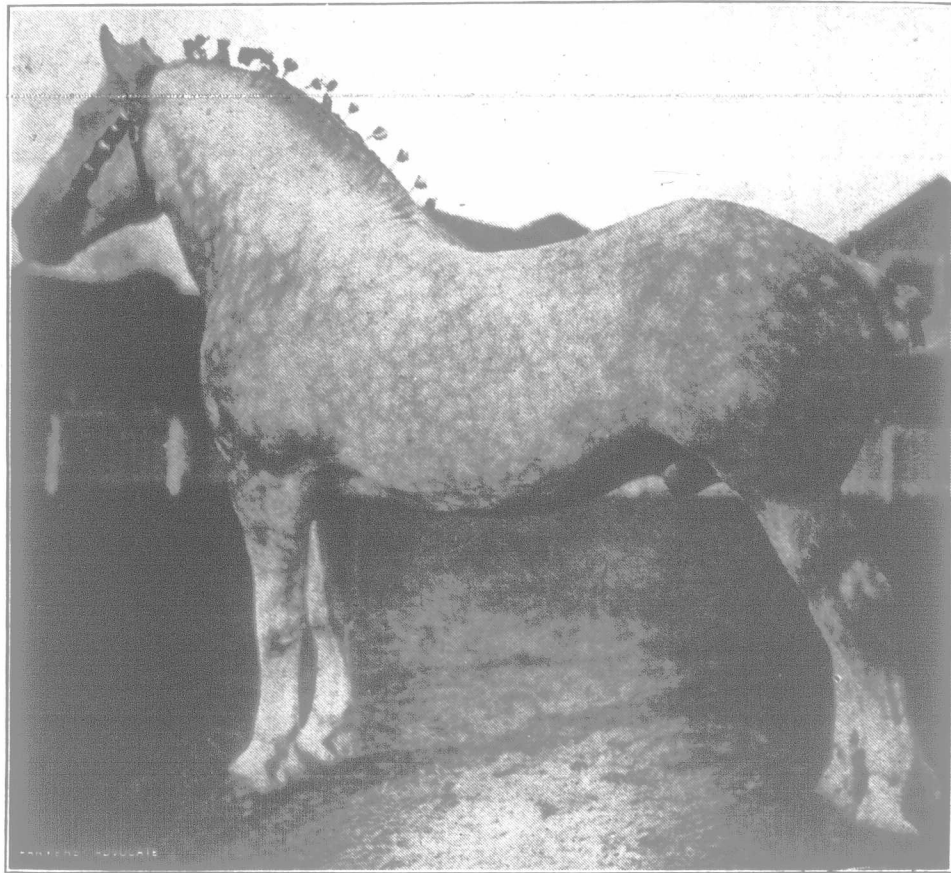
"Quality in horses is an indication of wearing ability. Not being correlated with substance it is difficult to attainment in draft horses, but the tendency is toward as much quality as possible with substance. Quality is indicated by the general refined appearance of an animal, clean-cut features of the head, thin, even lips, fine ears, neatness and refinement of neck and withers, soft, silky hair, thin skin, and a clean, dense bone with a freeness from puffiness around the joints. Upon the uniform quality of all parts of the horse depends his value and length of time he will be of service.

The draft horse must be energetic, showing sufficient nervous development to make him a willing worker. A sluggish disposition is to be avoided. There must be sufficient 'snap' about a horse for him to pick his feet up with a will, and to move off as if he meant business. Sluggishness is indicated by a lack of poise, by a slouchiness about the ears, and in the manner of standing. A good disposition is important, as it affects the ease of handling and working of a horse. It is desired that a horse perform his work willingly, and that he attends to his own business."

### The Horse To Breed To.

"The Farmer's Advocate" has been encouraging breeders to breed more mares this year and drawing attention to the fact that stallions will not be so easily obtained from Great Britain and Europe until some time after the war is over. This does not mean that mares should be bred to "cull" horses. There are still enough good stallions that "scrubs" should not be patronized. Farmers breeding mares to raise draft horses should select sires with plenty of size and substance. Use the horse which shows masculinity and with it is big and drafty in character with sufficient weight for a stallion of his breed and the quality of feather and bone desired. The stallion should be wide in the breast and full in the chest with a good middle to indicate feeding qualities. Never use a narrow-chested, gaunt, long-legged, peaked-rumped horse because he has no good bone, neither use a low-down, thick-skinned horse with coarse legs. Pick out a well-shaped horse with size, substance and quality and with that, dirty bone, a good slope of pastern and the big, wide feet and large hoof heads to stand the strain of carrying the great weight. Choose a short-backed, strongly coupled horse with a good, wide croup and thick thighs.

Look to the muscling—see that he has a large, full fore-arm and a well-muscled hind quarter. And last but not least see how he goes. Insist upon having a horse that goes straight and true at the walk and trot, one that reaches out well and puts his feet down squarely and does not roll or paddle and one that goes close at the hocks with that snappy movement well known to horsemen. In short select the horse which is heavy enough, has quality enough and does not cover too much ground in going.



Ichonobate.

Hodgkinson & Tisdale's great Percheron stallion, as photographed by "The Farmer's Advocate" camera, at Toronto Exhibition last fall.

## LIVE STOCK.

### A Feeding Trial Favorable to Silage.

With the increased price of feeding cattle, and the generally narrow margin upon which cattle must be fed, the economy of production becomes the most important consideration. The silo has reduced the cost of beef production very materially, and if any of the practices which stockmen follow at the present time are at all antiquated, they should at once be superseded by methods and rations that will prove more economical and up-to-date. The agricultural Experiment Station of Pennsylvania has conducted an experiment with five lots of feeding steers, wherein each lot receives a different ration. The lot receiving fodder and grain, as fed by the feeders generally in Pennsylvania, proved to make the most expensive gains of all, and one lot which received silage only as a roughage proved to make most economical gains. The bulletin in which the methods and results are published explains very fully the manner of feeding. After an examination of these rations results will be given.

The steers in Lot I. received the ration which is commonly fed in Pennsylvania. It was composed of mixed hay and corn stover as roughage, and chopped ear corn, or corn and cob meal, and bran as concentrates. The steers received all the mixed hay they would consume, and four pounds

of corn stover per head daily in addition. The grain mixture was composed of three parts corn and one part bran. Of this the animals were fed twice daily all they would readily consume. The mixed hay was fed in the evening, and the corn stover in the morning.

Lot II. received corn silage as the sole roughage during the entire feeding period. During the first 56 days no grain was added to the ration except cottonseed meal, which was fed at the rate of 2½ pounds per 1,000 pounds live weight daily, and continued throughout the entire feeding period. At the close of the 56-day feeding period, ear corn was fed at the rate of 15 pounds per 1,000 pounds live weight daily, for which 12 pounds of shelled corn was substituted later.

Lot III. received corn silage and alfalfa as roughage during the entire feeding period. The alfalfa was fed to supply the required protein in the ration. This lot received no grain during the first 56 days of the feeding period. The alfalfa was fed at the rate of 5 pounds per 1,000 pounds live weight daily, and the corn silage according to appetite. At the end of the 56-day feeding period, ear corn was added to the ration at the rate of 15 pounds per 1,000 pounds live weight daily, for which 12 pounds of shelled corn was substituted later.

Lot IV. received corn silage and mixed hay as roughage, corn silage being fed at the rate of 20 pounds per head daily, and the mixed hay ad libitum. The roughage, with cottonseed meal at the rate of 2½ pounds per 1,000 pounds live weight, was fed daily during the first 56 days. Ear corn was added to the ration for the balance of the feeding period, at the rate of 15 pounds per 1,000 pounds live weight daily. During the latter part of the feeding period the ear corn was replaced by shelled corn, which was fed at the rate of 12 pounds per 1,000 pounds live weight.

Lot V. received corn silage and alfalfa hay as roughage. The alfalfa hay was fed daily at the rate of 5 pounds per 1,000 pounds live weight. In addition to this the steers received all the corn silage they would consume. This roughage, in combination with 2½ pounds of cottonseed meal per 1,000 pounds live weight, was fed during the first 56 days of the feeding period. Ear corn at the rate of 15 pounds per 1,000 pounds live weight was fed daily for two months, while for the balance of the feeding period the grain ration was changed to 12 pounds of shelled corn.

The total season of feeding was divided into several periods, but the division of most interest to readers will be between the 56-day and 84-day feeding tests. At the beginning of the 84-day trial the animals were subjected to a change from roughage to a more concentrated ration, and the cost per pound of gain at once increased. The accompanying table sets forth three important items, namely, average daily gain, cost per pound of gain, and daily cost of feed.



Feeding Steers on an Extensive Scale.