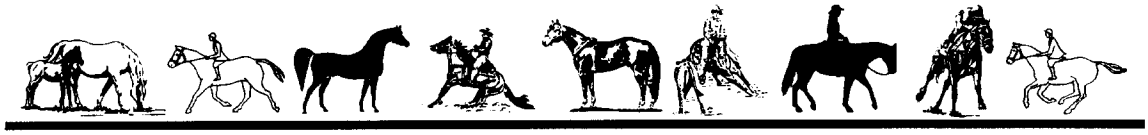
TEXAS A&M UNIVERSITY
DEPARTMENT OF ANIMAL SCIENCE
EQUINE SCIENCES PROGRAM



ESTIMATING HORSE BODY WEIGHT WITH A SIMPLE FORMULA

P.G. Gibbs and D.D. Householder

Knowledge of horse body weight is useful in determining how much daily feed is needed.[1] Also, paste wormers and other medications are designed to be dispensed at specific levels relative to a horse's weight. Unfortunately, most horse owners do not have easy access to a set of scales and must often resort to visual evaluation for estimating weight. However, one study conducted in Florida found that 88% of horse persons underestimated actual weight by an average of 186 pounds.[2] Similar trends have been observed at educational programs in Texas.[3,4,5] In one field study, 37% of horse owner estimates were at least 150 pounds below actual weights. Some horse owners tend to overestimate actual weights by visual observation. In the Florida study, 13% of participants overestimated by 90 pounds.[2]

Fortunately, there is a simple formula that can be used to estimate body weights of individual horses fairly accurately [6,7,8,9]. This formula utilizes heartgirth circumference, body length measurements and an adjustment factor [7,10]. This horse weight prediction equation is shown below:

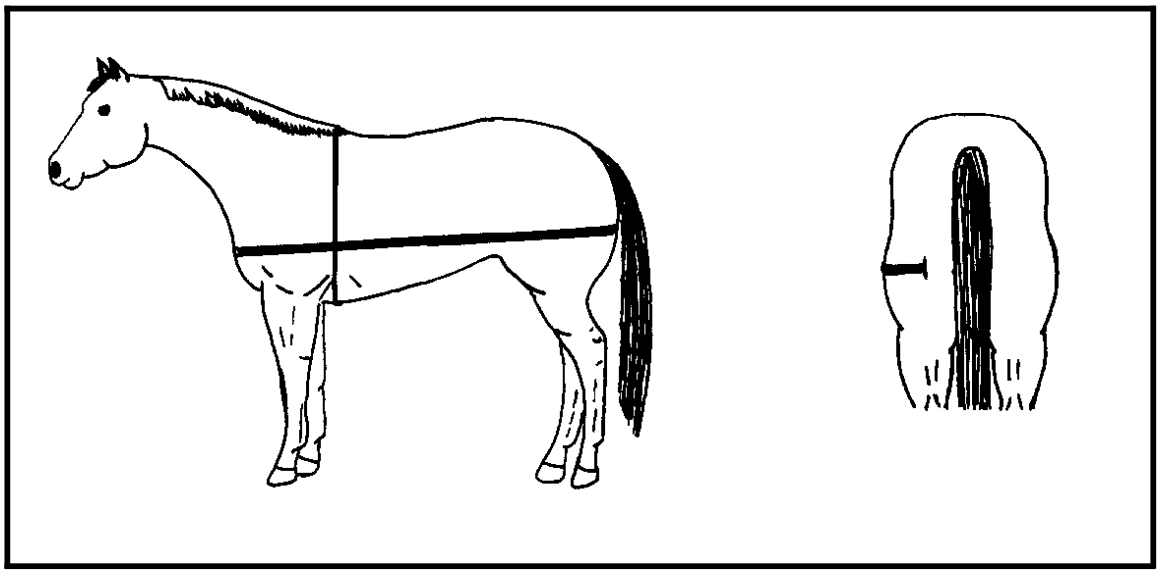
$$\frac{(\text{Heartgirth} \times \text{Heartgirth} \times \text{Body length})}{330} = \text{Wt (lbs)}$$

Measurements should be taken and recorded in inches with a tape that is at least 75 inches long. Plastic measuring tapes are preferred over cloth tapes because they won't stretch. Metal tapes can be used but they sometimes scare horses, making them the least preferable.[11]

As shown in the figure, heartgirth is a measure of the circumference, taken by running the tape measure all the way around the horse, using the highest part of the withers. Body length is measured from the point of the shoulder, straight back along the horse's side, and to the point of the buttock. The rearview figure shows that the tape should go around the corner of the hip and to the actual point of the buttock, which is essentially half the distance from the corner to the tail. Two persons will be needed in taking body length measurements. For owners who are learning to take measurements for the first time, it is advisable to get an actual scale weight on one horse and compare it to the prediction equation. This will help determine whether or not measurements are being taken from the proper points. The horse should be standing somewhat square. Furthermore, measurements of a horse to compare changes in weight over time should always be taken at the same time of the day, preferably in the morning prior to feeding.

In two demonstrations conducted at Texas A&M[4,5] a total of 12 horses were taped. The horses were of Arabian, Quarter Horse or Thoroughbred breeding and had actual scale weights ranging from 725 to 1275 pounds. The tape measurements and equation underestimated actual weight of 5 horses by an average of 15 pounds and overestimated actual weight of 5 horses by 12 pounds. One mare, that was extremely heavy fronted, deephearted and light hipped, was overestimated by 150 pounds. The prediction equation estimated weight of 1 horse exactly. Overall, the procedure averaged being within - 24 pounds of actual weight.

In summary, the above mentioned



prediction equation appears to be a more reliable method for estimating weight than visual observation. The procedure can be used effectively on many horses, but may not be highly accurate for pregnant mares or for horses with extreme conformational irregularities, especially very unbalanced horses. All in all, horse owners should be able to utilize this simple tool in better managing horses.

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