

What Does Your Horse Weigh?

By DR. JOE D. PAGAN, Kentucky Equine Research, Inc.

Determining what a horse weighs is the foundation of a logical feeding and management program. In addition to helping calculate daily intake requirements for hay and grain, accurate assessment of each horse's weight is necessary for the proper dosage of dewormers and other medications.

In mature horses, keeping track of weight losses can help identify health problems related to teeth (which become worn and need periodic floating) or decreased digestive capability, either due to increasing age or disease. But older horses are more likely to be obese rather than too thin. Since an owner in most instances observes a horse daily, it is often easy to overlook the fact that the mare or stallion has become too fat. Obese horses are more prone to colic and founder, and fat mares

have more difficulty foaling as well as getting back in foal. Recent studies also indicate that performance horses have ideal body weights at which they compete at their best, and minor fluctuations of as little as 30 pounds can mean the difference between victory and defeat.

Grow Slow

In growing horses, there is a difference between maximum growth and optimum growth. Many breeds have been selected for early maturation, but if too much weight is gained daily (as opposed to skeletal growth), a variety of developmental ills can result, including OCD lesions, wobblers syndrome, rotational deformities and epiphysitis. Some of these problems are mechanical, and are the result of growth plates failing under the added strain of the overweight weanling or yearling. Some of these problems have a number of origins, but are complicated by too rapid growth. Again, bimonthly or even weekly monitoring of the growing horses' weights can help identify which horses are at risk of these and other problems, and may need to have their feed intake reduced to slow their weight gain. Since it has been found that skeletal growth is difficult to slow, there should be little concern that the horse's eventual size can be compromised. It is only the control of too rapid weight gain (i.e. fat) that is the reason for monitoring each individual's growth curve.

Guess Your Weight?

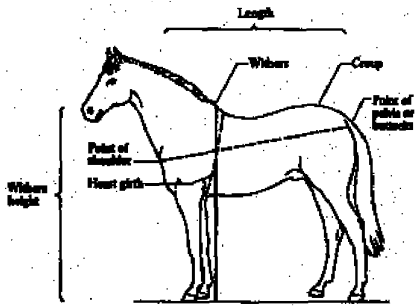
While the old adage "the eye of the master fattens the ox," has been repeated since antiquity, recent surveys have found that even experienced horsemen routinely underestimate body weight. Two groups, one made up of 77 horsemen (average experience was 15 years) and the other of 62 equine practitioners, were asked to participate in a University of Florida study.

Only 10% of the veterinarians and 12% of the horseman used a scale to actually weigh their horses. Although some in each group said that they did use a weight tape (21% of the veterinarians, 53% of the horsemen), the majority of the veterinarians (96%) and horsemen (68%) said they primarily made a 'guesstimate' of the horses' weight.



Scales provide the most accurate body weight measurement.

Figure 1.
Where to measure girth and length.



Each group was then asked to estimate the weight of 5 mature horses, which had been weighed just before the test. Over 85% of both groups underestimated all the horses' weights, by an average of 150 to 185 pounds. When these data were analyzed, it was found that there was no correlation between the accuracy of the estimations and length of horseman's experience. This led the researchers to conclude that underestimation of body weight was a common error among both lay horsemen and equine veterinarians.

Scales Don't Lie

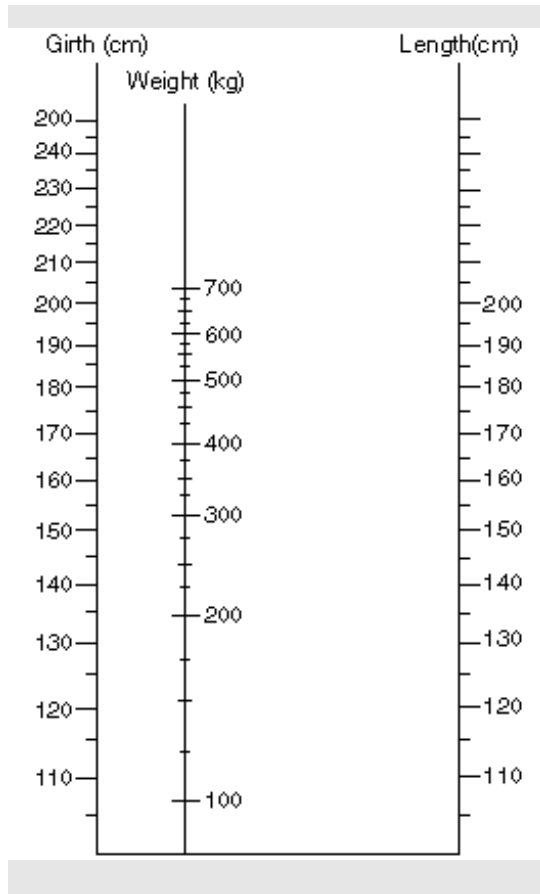
Fortunately, even the most inexperienced horseman can use several methods to determine how much their horses weigh. The most accurate method is to use a large portable scale. Such scales are now available which are relatively light (150 pounds), and can be easily loaded by two people into the bed of a light pickup for transit. Since the scales are low to the ground (less than 5 inches), horses of all ages soon learn to walk on, while a digital readout gives their weight in either pounds or kilograms. The process takes only minutes per horse, and yields a great deal of information, particularly if the data are then compared to the preceding weights, for both the individual and for the group. Several computer programs can then take these data and graph the growth curve of the individual, as well as calculate daily gain (or loss) since the last weighing.

Unfortunately scales are pricey (around \$3,500) and so are beyond the average farm's budget. However, some feed companies have purchased scales and provide a weighing service for their customers' horses at a nominal fee per head. Weights are recorded and it becomes easier to keep track of growth rates for the herd. Problem horses can be identified, and in consultation with the manager or owner, a strategy to manage the problem can be developed.

Tale of the Tape

But there are alternatives to the purchase of a scale. The simplest is the weight tape. It has been long known that there is a correlation between girth measurement and weight. Many horses have had their girth measured and then had this information compared to their actual weight as determined on a scale. The averages of all these measurements were compared with the actual weights. Formulas were developed that translated a girth measurement into an approximate weight.

Weight tapes are not marked in inches, but in pounds, thus eliminating the calculation step. And in many instances these weight tapes can provide a reasonable assessment of weight change. However, because they only measure one parameter, girth, weight tapes alone are not the most accurate alternative to weighing. Weight tapes can be as much as 5% or more off (50 pounds per 1,000 pounds), and thus are not accurate enough for small, but potentially important, weight changes. There is a certain amount of error possible depending on who is taking the measurements, and whether they are taken in a consistent manner.



A simple way to estimate body weight, using girth and length measurements, (as taken at the points in fig. 1). A ruler is used to connect the appropriate values, and the weight is read where the ruler crosses the weight scale.

Also, horses can be long backed or short coupled, and while they might share the same heart girth, the horse that stood over more ground could be assumed to weigh more. Similarly, the amount of flesh a horse is carrying can significantly affect

any weight estimation.

Measuring both heart girth and length will improve the accuracy of weight estimation. The chart in figure 2 can be used to estimate weight from these measurements.

The Condition Score

Absolute weight is not the only important criteria by which to evaluate the horse. Appearance and condition have always been used as indicators of fitness and health. This condition score system was developed in an attempt to standardise these descriptions, to allow for easier comparison and communication



0-VERY POOR

- 3 Very sunken rump
- 3 Deep cavity under tail
- 3 Skin tight over bones
- 3 Very prominent backbone and pelvis
- 3 Marked ewe neck



1-POOR

- 3 Sunken rump
- 3 Cavity under tail
- 3 Ribs easily visible
- 3 Prominent backbone and croup
- 3 Ewe neck-narrow and slack



2-MODERATE

- 3 Flat rump either side backbone
- 3 Ribs just visible
- 3 Narrow but firm neck
- 3 Backbone well covered



3-GOOD

- 3 Rounded rump
- 3 Ribs just covered but easily felt
- 3 No, crest, firm neck



4-FAT

- 3 Rump well rounded
- 3 Gutter along back
- 3 Ribs and pelvis hard to feel
- 3 Slight crest



5-OBESE

- 3 Very bulging rump
- 3 Deep gutter along back
- 3 Ribs buried
- 3 Marked crest
- 3 Fold and lumps of fat

A Better Weigh

To help eliminate some of these inaccuracies, researchers at Texas A&M and elsewhere have developed descriptions to contrast the differences in horse's relative fatness or thinness graded on a scale of 1 to 9 (or in some instances 0-5). Such condition scoring gives the observer a framework by which horses can be compared. Although not objective, this is an improvement over the pure guesstimate.

A combination of girth measurement, overall length and condition score is the most accurate alternative to actual weighing. Although it may take some time for an individual to be able to develop a systematic approach that is reproducible from one day to the next, this expertise will come if care is taken. Similarly, familiarity with the condition score will increase the accuracy of the weight estimates, and will improve the horseman's eye, which will reap benefits in other areas of husbandry as well.

The Condition Score

Absolute weight is not the only important criterion by which to evaluate the horse. Appearance and condition have always been used as indicators of fitness and health. This condition score system was developed in an attempt to standardize these descriptions, to allow for easier comparison and communication. 