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Recognition of the Proper Shoeing of the Normal Working Horse

Michael Riegger
Iowa State University

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Lion: 0.5–0.7mg/kg xylazine or 0.5mg/kg with phencyclidine
Hyena: 1mg/kg or 1mg/kg with phencyclidine
Impala: 0.87–8.37mg/kg or 0.4–0.5mg with etorphine for adult animal
Buffalo: 0.20–1.25mg/kg or 5mg with etorphine for adult wild bull
Eland: 0.6mg/kg or 4–5mg with etorphine for adult wild animal
Kudu: 0.7mg/kg or 3–4mg with etorphine for adult wild animal

The duration of action of xylazine is dose dependent. Recovery is usually smooth but the animals can react to loud noise and physical contact by regaining consciousness and their feet too soon. So they should be left alone and in a quiet place with no disturbances.

Bibliography

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by
Michael Riegger

Introduction

Horseshoeing is a vast and complex art and science, and it has many areas which will not be discussed here. Rather, I will limit this discussion to the proper shoeing of the normal working horse. The average Quarter Horse with a sound healthy foot will be considered the normal working horse for the purposes of this article. It must be remembered that horses with gait or conformation problems will be shod as variations to the normal.

Purpose of the Shoes

Why shoe a normal healthy horse? The horse has been bred and used over the years in an environment artificially created by man. Gravel roads and show arenas are very traumatic to the hoof. Coupled with this unnatural trauma, man has selectively bred for the smaller, more refined hoof, which is less durable. Consequently the horse is less able to withstand a rigorous program of use. To enable the horse to remain usable over a season, the shoe is used to give resistance to the hoof. Thus the purpose of shoeing a normal working horse is aimed at increased durability without the loss of natural mobility.

The Shoes

The primary consideration for the working horse is the angle and the balance of the hoof. The “way of going” is only important as it relates to the athletic ability of the working animal. A close analogy is the tennis shoe that we wear. A good fitting tennis shoe is an asset to an athlete, while an improperly fit shoe is a detriment.

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The angle of the hoof wall must be determined for each horse individually according to the landmarks of the horse. The bulb of the heel should just touch the axis of the cannon (which is perpendicular to the ground), and the slope of the pastern should be the same as the slope of the hoof as shown in figure 1.

The plane of the ventral surface of the hoof with respect to the axis of the cannon should be perpendicular. This relationship, called balance, is determined by viewing the hoof from the posterior view as illustrated in figure 2.

The types and styles of shoes are numerous and can be identified in catalogs, but for normal situations the average working horse needs only a plate. The shoe should be shaped to the hoof. It is improper to shape the hoof to the shoe. There should be no “daylight” between the hoof and the shoe. The nail holes should be located in the anterior 60 percent of the shoe and this area should be
flush with the edge of the hoof wall. The posterior 40 percent of the shoe should gradually extend laterally beyond the edge of the hoof wall, so that the shoe is one-sixteenth to one-eighth of an inch wider than the wall (figures 3 and 4). The end of the shoe can extend posteriorly up to one-fourth of an inch beyond the end of the hoof.

Viewing the hoof from the volar or plantar surface, the shoe will cover the white line of the hoof. It is important that the shoe not trap dirt and debris in the area beside the frog (figure 5). One should be able to pass a hoof pick between the frog and the end of the shoe.

**The Nails**

The nails and their placement are very important. There is a variety of sizes and shapes of nails. For the average shoe sizes (000 to 1, Diamond Shoes), the number five city head nail (Capewell Mfg.) is recommended. The nails should be driven parallel to the growth of the fibers of the hoof (illustrated in figure 6). This produces the least destruction of hoof fibers and reduces the tendency for nails to tear out chunks of hoof.

Another important point is the height of the nails on the hoof wall. Obviously the various hoof sizes and shapes will require different heights, but over the size range 000 to 1) five-eighths of an inch to one inch is suitable. Nails which are less than one-half of an inch above the dorsal shoe surface have a tendency to tear out a piece of the hoof wall. The tops of the nails should all fall on a straight line and this line may be parallel to the ground surface or a compromise between the line of the coronet and the ground line (figure 7). The clinch should be approximately one-eighth of an inch long and nearly flush with the surface of the hoof wall.
The nail heads should not extend more than one-sixteenth of an inch below the surface of the shoe.

**Replacement and Reset**

How long should a set of shoes be left on? The shoes on the average working horse should be reset every four to six weeks during the heavy use season. If shoes are not reset at frequent enough intervals, the elongated hoof will decrease the athletic ability of the individual and in addition will cause excess strain to the flexor tendons and suspensory ligaments.

**Summary**

In summary the major considerations in recognizing proper shoeing are the angle and balance of the hoof, the shape of the shoe, the fit of the shoe and the character of the set of the nails.

The last comment I will make concerns the symmetry of the hoof on an individual. The front feet generally are mirror images of each other and the same holds true for the hind feet. The front hooves usually are one-half to one size larger than the rear hooves (Diamond Shoe sizes).