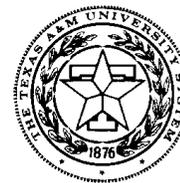


**TEXAS A&M UNIVERSITY
DEPARTMENT OF ANIMAL SCIENCE
EQUINE SCIENCES PROGRAM**



EVALUATION OF HORSE SHOEING TECHNIQUES

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Proper shoeing is of the utmost importance to the performance horse. When a performance horse is properly shod, he travels in a fashion where his feet hit the ground level. This action distributes thousands of pounds of concussive force uniformly through the feet and up the columns of leg bones. This is opposed to improper shoeing and travel where a horse lands in a less than level fashion which causes undue stress on certain area(s) of the feet and/or limbs. Proper absorption of shock leads to the long term soundness of the horse plus makes him more comfortable in his way of going. This ultimately improves his performance.

The purpose of this paper is not to discuss all aspects of farrier science, but to identify and briefly discuss ideal shoeing characteristics and a few deviations from ideal shoeing techniques. Parts of a horse's foot (Fig. 1 a,b) are shown to clarify foot terminology. Persons aspiring to be good horsemen should become proficient at utilizing these evaluation criteria and scorecard in evaluating the shoeing job on their own horses.

EVALUATION CRITERIA

TRIMMING THE FOOT - Proper trimming of the hoof basically deals with side and frontal alignment and levelness of the hoof.

Hoof Pastern Axis - When viewed from the side, the foot should be trimmed to allow straight alignment of the hoof up through the pastern (Fig. 2). Also the hoof pastern axis should be at the same angle as a line drawn from the point of the withers to the point of the shoulder (Fig. 3). Deviations in proper axis are

broken back pastern axis or axis below the correct line (i.e. extra long toe and heels too low) (Fig. 4) or broken forward pastern axis or axis in front of or above the correct line (i.e. excess heel, knuckling over) (Fig. 5).

Medial/Lateral Balance - When observed from the front, the foot should be trimmed to allow straight alignment of the hoof with the column of bones above the foot (Fig. 6). The foot should be level on the inside and the outside, not trimmed in a toed in (Fig. 7) or toed out (Fig. 8) fashion.

Hoof Wall - The foot should be trimmed such that the walls are straight (Fig. 9) with no flares (Fig. 10) and the quarters are level (Fig. 11) with the ground surface. The later is a common fault in shoeing where a farrier uses a rasp in a side to side motion (Fig. 12) across the quarters rather than in an even heel to toe rasping motion which levels the foot.

FITTING THE SHOE TO THE TRIMMED FOOT - The shoe should be shaped to fit the trimmed foot, not the trimmed foot shaped to fit the shoe.

Outer Perimeter - Front feet and hind feet are different in their basic shape. Front feet, which bear 60% of horse's weight, are rounder (Fig. 13); hind feet are more pointed, oval or egg shaped (Fig. 14). (Note: Some keg shoes are normally more oval and will need to be shaped rounder to fit front feet.) Also

the bottom front of the hoof wall, when viewed from the side, should extend straight to the shoe (Fig. 15) rather than being dubbed off to fit a shoe that is too short for the actual length of the foot (Fig. 16).

Length - Shoes should be long enough to cover the heels (Fig. 15).

Heel Width Expansion - Shoes should fit the foot widthwise, and in addition be approximately 1/16" wider than the foot from the last shoe nail hole back (Fig. 17). This allows for heel expansion. Numbers of nails and correct nail placement obviously effects heel expansion. (Note: A farrier should be able to roll a quarter against the hoof wall on top of the shoe from the last nail hole back to the heels.)

Placement - Shoes should be placed on the foot such that the center of frog points directly to the middle front of the shoe (Fig. 18) rather than off center (Fig. 19).

FINISH - This category deals with making the job pretty. A foot can be shod functionally correct and not finished, which is not a serious problem to the horse. Don't be fooled by a pretty finish work on a job characterized by poor trimming and ill fitting shoes.

Nail Placement - Nails should be placed level to the ground; not uphill, downhill or uneven. Nails should be approximately one third of the way (usually 3/4 inch) (Fig. 20) up the hoof when measured from the ground surface. To allow for foot expansion, nails should not be placed further back than the widest part of the foot. Incorrect nail placements patterns are uneven and/or too far back (Fig. 21), nails too close to the ground surface (Fig. 22), or nails placed too high.

Clinches - Clinches should be tight (into small troughs), smooth, and rectangular (Fig. 24), not rough and long (Fig. 25). A farrier should be able to run his hand over the outside of the hoof wall and not feel the clinches. The ultimate test is to run a pair of panty hose over the hoof wall and get no snags!

EVALUATION SCORECARD

Below is a simplified version of a Horse Shoeing Evaluation Scorecard, adopted from the Texas Professional Farriers Association, Horse Shoeing Scorecard, utilized at the 1984 TAMU Horse Short Course. The below scorecard, with relative values of importance assigned to each criteria category, should be helpful to horsemen as they become skilled in evaluation of shoeing jobs.

CRITERIA	POINT VALU E	HORSE				
		1	2	3	4	5
Trim						
hoof pastern axis	18					
medial lateral balance	18					
hoof wall	9					
Shoe Fit						
outer perimeter	14					
length	14					
heel expansion	9					
placement	8					
Finish						
nail placement	6					
clinchers	4					
POSSIBLE SCORE	100					

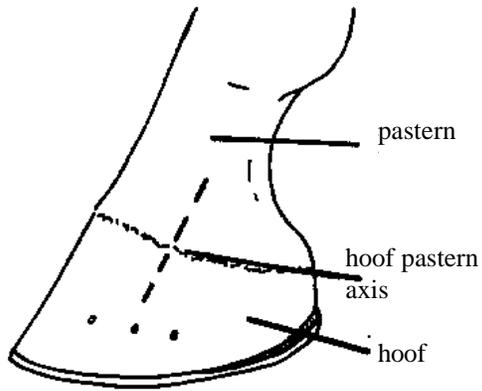


Fig. 1a. Parts of the front foot - side view.

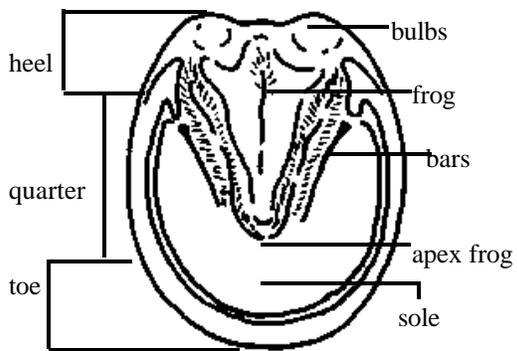


Fig. 1b. Parts of the front foot - bottom view.

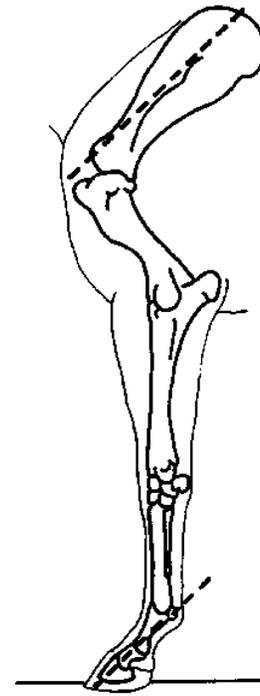


Fig. 3. Correct shoulder and pastern angles.

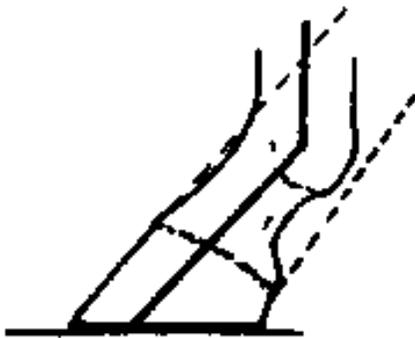


Fig. 2. Correct hoof pastern axis.



Fig. 4. Broken back pastern axis.

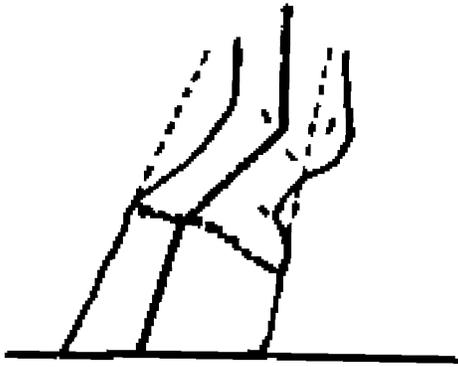


Fig. 5. Broken forward pastern axis.

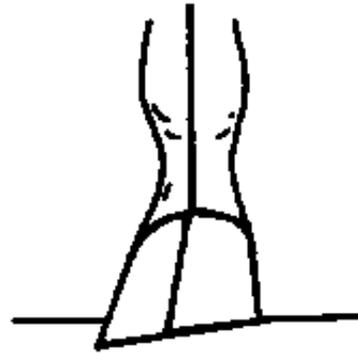


Fig. 8. Unbalanced toed out right front foot.

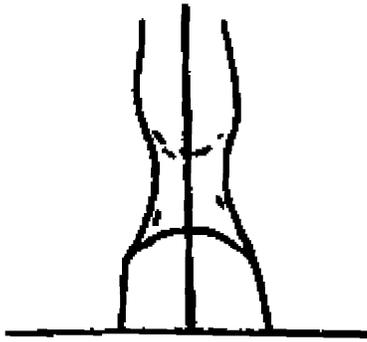


Fig. 6. Correct medial lateral balance.

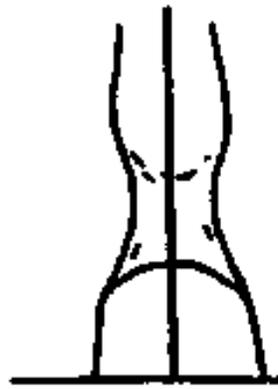


Fig. 9. Correctly trimmed hoof wall.

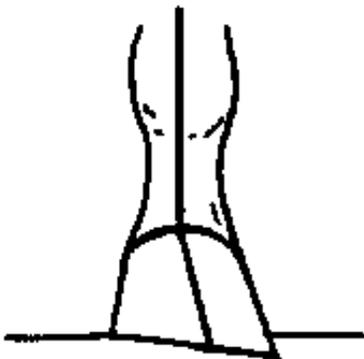


Fig. 7. Unbalanced toed in right front foot.

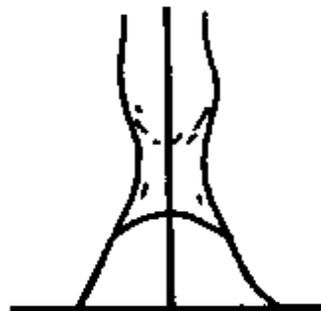


Fig. 10. Incorrectly trimmed hoof wall with flare on one side.



Fig. 11. Correctly trimmed wall at ground surface.

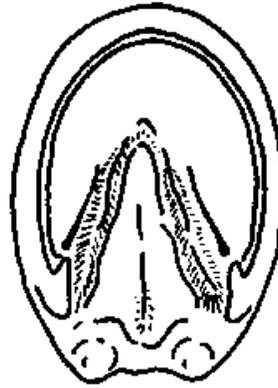


Fig. 14. Basic oval rear foot shape.



Fig. 12. Incorrectly trimmed quarters.



Fig. 15. Correct shoe length.



Fig. 13. Basic rounder front foot shape.



Fig. 16. Toe incorrectly dubbed off to fit shoe.

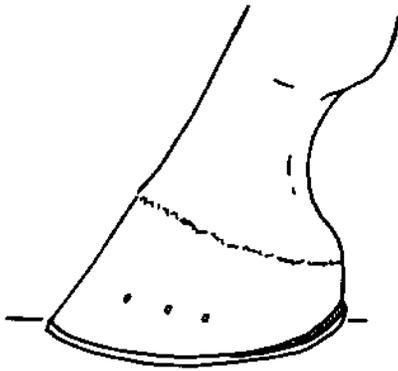


Fig. 17. Correct shoe expansion from quarter to heel.



Fig. 20. Nails correctly placed level and 3/4 inch up from ground surface.

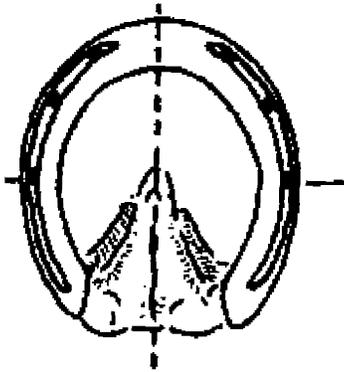


Fig. 18. Apex of frog points to middle of shoe.

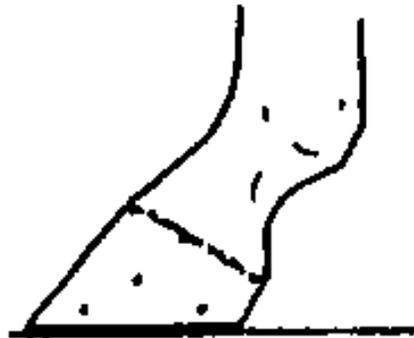


Fig. 21. Nails incorrectly placed uneven and too far back.

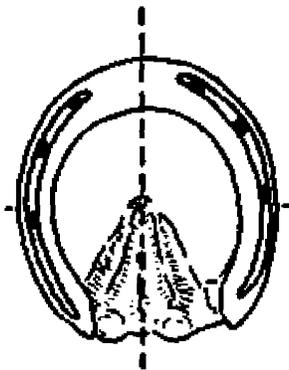


Fig. 19. Apex of frog points off middle of shoe.



Fig. 22. Nails incorrectly placed too close to ground surface.



Fig. 23. Nails incorrectly placed to high up in hoof.



Fig. 24. Correct smooth, rectangular, tight clinches.

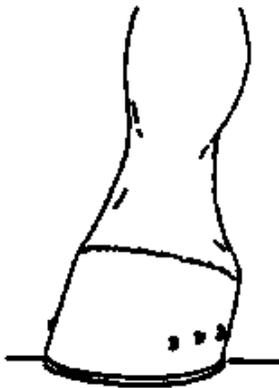


Fig. 25. Incorrect rough, long, loose clinches.