Arena Footing and Design

When the conversation between horsemen and women turns to arena footing, confusion usually ensues. Everyone seems to have different ideas about what makes good and safe footing and not everyone fundamentally agrees that attention to the arena footing is all that important.

However, there has been a real awakening in the last twenty years to the importance of a quality arena and how it affects both the horse and rider. The old mindsets of “dirt is just dirt”, “the horse is made to run on rough ground”, and “I’ll just force my horse into ignoring the poor ground conditions” are quickly becoming thought processes of the past.

Recently there has been an intellectual shift and the surge of natural horsemanship training has invoked the idea that the arena footing does play a critical role in the horses’ safety and in its performance. World Champion Al Dunning states that “today, we are asking so much more from our horses. We are also breeding them to have finer bones and so, the aggressiveness of the footwork that we are asking from them can cause a lot of leg, joint, and tendon damage. Therefore, the ground that we work our horses on everyday has to be in a condition that will keep our horses sound; this has to be one of our highest priorities.”

In this article I’m going to address two of the most common questions when it comes to arena footing. In later articles we will take a look at arena footing in more detail but for now let’s focus on answering the questions of “How does my footing affect my horses performance?” and “How does my footing affect my horses legs?” (Its soundness)

In order to understand how your arena footing affects your horses’ performance, it is imperative to understand the basic nature of the horse. As we all know, horses are naturally wild animals; they are animals of prey and have millions of years of fear bred into them. A horse will typically react to its instincts far quicker than it will ignore them and this “reactionary” nature is what makes breaking and training a horse such a difficult task.

So, when you are in the arena, working your horses, you need to remove any sense of danger from them. Your horses need to be able to leave their instinct to flee from danger at the gate of your arena and trust that you are not going to cause them any harm. Ultimately, you want the horses’ mind to be in tuned with you and the signals you are giving it from your seat, legs and reins. If a horse is sensing danger in an arena, its mind is not with you; that’s a guarantee, and the hard work that both you and your horse are doing is being dramatically minimized.

On a regular basis, I receive calls from arena owners saying, “I just don’t understand why my horse responds beautifully in part of the arena but acts like it’s never been ridden in another section of the ring”. Immediately, I start probing about the
condition of the arena footing and base because I know that, inevitably, the horse is reacting to, what it believes is, an unsafe environment. Perhaps the footing is deeper, looser, harder, wetter or more slippery in that part of the arena. In reality, the horse doesn’t’ really care what’s causing it to feel unsafe; it just believes that it is in danger and won’t respond to the riders cues.

A horses’ natural and fearful instinct is not the only factor in how your arena footing affects its performance. The kind of footwork and footfall required for your specific discipline requires that your arena footing have different attributes, depth and moisture content. Not every arena needs to be built the same; in fact, quite the opposite is true. Every arena is unique and different disciples (sports) require different types of footing and base materials. Let’s take a look at a couple of examples of how the wrong kind of footing can affect the horses’ performance. I’ll use one example from the Western world and one from the English world.

So let’s say you have gone out and bought a nice little Reining horse; and of course you are using Clinton Andersons’ training methods! You go and “whoa” your horse to “stop” at the end of a slide but it just keeps going and going and going. Your arena footing is most likely to blame because it’s probably too loose, shifty and doesn’t provide enough resistance to allow your horse to make an acceptable slide and stop. You are now frustrated and your horse isn’t getting the training it needs to win the Futurity!

If you’ve got a nice jumper and you just can’t get over the four-foot height, perhaps your footing doesn’t have enough “purchase” because there is not enough strength and resistance for your horse to push against to take both of you up and over successfully.

I’m sure you want to know whether the perfect arena footing guarantees your horse to be the next million-dollar earner? Of course not, but it will give you and your horse the best opportunity to train effectively so that you both can perform to your maximum ability.

In both of these examples the “cause” of the failure in performance had to do with the material composition and, or, the amount of moisture in the footing. However, one of the most over looked causes of poor performance related to arena footing has to do with the condition of the footing under the surface. So often, when it comes to dragging the arena, the arena owner simply uses a chain harrow and smoothes out the top surface to only get rid of the hoof marks. Unfortunately, the horse isn’t reacting to what the top of the footing looks like, it’s reacting to the condition of the footing between the base and the surface. Inconsistent depth, hard and compacted spots, and holes in the base have far more effect on the horses performance than does the surface of the footing.
The term “soundness” may, or may not, be familiar to you, but in answering the second common question when it comes to footing it will be important to know that this term refers to the health of the horses legs. So, does the arena footing that you work your horse on really affect the soundness and safety of the horse?

Although there is a misconception that, because horses used to run wild on the open range, they do not need to be "babied" with good footing, the answer to the above question is a resounding yes! Your arena footing most definitely impacts the soundness and safety of your horses!

Veterinary experts all over the world agree that at least eighty percent (80%) of all soundness related injuries in performance horses comes from the arena footing on which they are trained. Unfortunately, for the horses, many of your weekend riders and non-competitors don’t even recognize that an injury has occurred but simply assume their horse is being lazy or uncooperative; when in reality, the horse is injured and needs a veterinarian’s attention.

It is important to know that poor arena footing is not the only cause of soundness related injuries. There are three major causes of leg injuries in horses. The first, and most common, is poor arena footing. Secondly, heredity plays a role in the soundness of the horse. Similar to any animal breeding industry, a horse can have a pre disposition to joint, ligament or bone weaknesses. Finally, improper training can also cause a horse to go lame. Working a horse long after it has reached its physical peak during a training session, or asking a horse to make a maneuver that it is unprepared for can also be dangerous. However, there is no disputing the evidence that most leg injuries in horses are due to the improper type and maintenance of the arena footing.

How does bad arena footing cause the injuries? Let take a look at a couple of examples of how a poorly maintained or damaged arena can hurt your horse. In the first example we are going to examine the “base” of the arena. This is the surface directly below the riding dirt/sand. In later articles I will be addressing the importance and construction of a base, but for now let me just say that having a smooth, hard and consistently level base is imperative to keeping your horse safe.

Quite often, the base of an arena is damaged and the owner is not even aware of it. If the base material is too soft or wet, a horses’ hoof or a spike from an arena drag can gouge into the base picking a small hole in the surface. When this happens, this is usually the beginning of the end for the base. Most often, this small hole keeps getting bigger over time and then you end up with pretty good size craters below the footing surface. Now, here is how for the horse gets hurt. With hardly an exception, the arena owner smoothes out the top surface of the arena without repairing the holes in the base. Now, the arena looks good but the horse has a variety of depths in its footing and as it travels through the arena is will most certainly stumble into one of the holes and stands a great chance of injury. To apply this to a human experience it would be similar to coming down a set of stairs and
not realizing you are not at the bottom, and then taking that last step thinking you were on level ground. Your knees, ankle and muscles are not prepared for the jolt you are about to take and you too would stand a great risk of injury.

When looking at the top riding surface, as it relates to injuries, there are many different ways that a horse can be hurt. For example, too little moisture in the footing can make it loose and shifty. As a horse moves around a barrel or over a jump its legs can go right out from underneath it injuring both the horse and the rider. Simply keeping the right amount of water in your arena could avoid this kind of tragic event from happening. However, if you have too much water in your arena, your footing can become too dense, or tight, and when dragging with a spiked arena drag you will leave hard ridges under the surface. In this situation your horse can twist an ankle or tear a tendon when sliding against these ridges.

The intent of this article is not to scare you out of riding or training your horse in an arena, but to make you aware of how important the quality and maintenance of your arena footing is to your horses safety and performance. There is no doubt that many of you reading this article are saying to yourselves, “yeah, but I’m no Clinton Anderson and my horse is no million dollar winner”. My answer to you is that your horse doesn’t really know the difference and it is still your responsibility as a horse owner and lover to do all you can to keep your horses safe and sound. Obviously, budget plays a big part in what kind of arena and footing you can own but I’ve always said that even if you don’t have a lot of expendable money, with the right knowledge and equipment you can take bad, dangerous ground and turn it into safe and enjoyable footing for both you and your horse.

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