

FEBRUARY 9TH, 2003

EQUINE CANADA SEMINAR – OTTAWA, ONTARIO

SAFE FOOTING FOR RIDING

Footing is one of the most important ingredients in the development of horses in training, and for the safety of the rider. With good reason, today's trainers and riders are becoming more and more demanding. Footing, while little more than dirt and rocks can be mixed in different proportions to create very different results.

There are many types of equestrian sport. For each sport that you can do on horseback, there is an appropriate footing. The footing type will enhance rider performance, comfort for the horse and provide safety for the rider. Footing for one activity may be too rigid for another, so this is important to keep in mind when designing the finished product. It is important to understand the needs of the individual project.

The base and sub-base are most important. If there are problems with the sand topping there are ways to fix it; if the base or sub-base are improperly constructed or just plain bad the cost of remove everything and starting again is just too much to imagine.

The bottom layer is the sub-base, usually the native soil, often stone dust or rock. The sub-base is levelled and should be allowed to settle before the base is laid down. Indoor arenas only a sub-base and sand topping are usually necessary because you don't have to put consideration towards drainage. You might need a stone dust layer when there is too much rock or debris that needs to be covered. We may also use clean clay here to help make a good solid foundation.

The base is where the recipe for footing really begins; it should be very firm because it is the foundation. If the base is too weak a horse can break through, and weather can wear it down. If you build the base right, you should not have to worry about drainage problems or an uneven riding surface. Geographical location also foretells what the make up of the base should be. In wet climates, you have to have use a gradation of stones to drain water. In drier zones, clay can be utilized if it is well prepared. The most often overlooked ingredient in the footing is time. Do not rush construction; natural compaction occurs with rain, sun, heat and cold. The time of year is also important. In parts of the world where it snows, not that Canadians would know anything about snow, getting a ring finished before the winter helps because the moisture and weight of the snow that lies on the base helps pack it down. Once the

base is packed down, if there are any slope problems or depressions that collect water that need to be filled you will know.

When it comes to the topping, it seems to me that basic materials are still better than the latest trends. There is nothing wrong with simple sand, in fact, it is everything that is right, I use it in all my toppings, and not every sand will work. Some sands are too dusty, or globular. You want it to be firm, not like beach sand. It has to be coarse but has enough loam, a sand-soil mix, to keep it together. I have worked long and hard to narrow down the range of sand I consider suitable for footing. Though each project that I work on requires special attention to the materials, certain constants remain. If your level of fines, which are silt and clay, exceeds a certain level, then when it gets wet that sand is useless, it may be too slick to ride on safely. If the level fines are too low you will not get good compaction, the sand is always shifting. If the ring is built without an irrigation system, the percentage of fines has to be kept lower because they cause dust, though there are dust suppressants than can be used. For grass field the sand percentage of the topping has to be around 75 percent of sand particles.

Additives may be used to stabilize the topping. They can be additive such as rubber shavings, or synthetic fibres to either bond or loosen the sand, they are not what make the footing. You should avoid organic material like wood chips. You may not want to simply believe the all the claims of every footing-additive manufacturer, as not every product is appropriate for every ring. Adding rubber shavings to sand is a problem for outdoor rings. Rubber is lighter than sand, when it rains, the rubber floats to the surface and will eventually be washed away. If used properly rubber can be good indoors; the sand does not pack as quickly as it might otherwise without it. The rubber can keep it a bit more bouncy for a longer period of time, as long as you do not over water.

To keep costs down you would buy your materials from a nearby site. Footing does not have to cost a lot. What makes it costly is the delivery. Find the closest possible supplier. You may have to look around to learn what materials are available in your area. Contact as many quarries as possible to shop for the best prices on sand and rock.

COSTS AND FACTS OF BUILDING A RIDING SURFACE

I have been involved in the building of over 300 sand rings and 50 large grass fields. I have a basic concept for my footing design, but I would say each one is different because of the climate and location.

One of our main concerns is keeping the costs down when building a ring. Using local materials is going to help keep the price from getting out of hand. The owner then also has a source of materials for future maintenance.

The size of ring you build will depend on what equestrian sport it's used for. To build top-notch arena footing takes planning, patience and investment. As a guideline, a new outdoor arena will cost around one dollar per square foot. The fencing will cost on average about six to ten dollars a linear foot, so even for a small arena 110' by 240' (26,400 square feet) the cost could be \$35,000.00, which is a substantial investment. The reason we are talking costs is to show that location and size of a ring are an important consideration. Good Footing makes a good ring, but a great location for the ring and appropriate size make it great ring. A good strategy is to build the ring in a spot that provides safety and supervision, preferably one with a view from the barn and the tack room. If you are planning to sell the sport, a nice way to present it is landscaping around the ring.

If you are planning to build a ring soon, do your research and planning, if done right you should end up with a great finished product. Safe riding!

A handwritten signature in black ink, appearing to read "R. Jolicoeur", with a long horizontal flourish extending to the right.