

# TALKING ABOUT WATER...

by Lee Smith

After a long cold prairie winter there is no better feeling than that first warm sunny day when you can ride outside comfortably.

That warmer weather brings the spring thaw and those wet mucky conditions we all know and love so much. Make this year the year that you actually DO something about the wet places that drive you crazy, pull your horse's shoes and strain their legs.

Document any problem areas now so they can be fixed for next year. Make notes of where water collects, how long it takes to dry. Even take photos to remind yourself.

When planning the development of your acreage property for keeping horses, drainage should be one of your first considerations. Elevation, slope and soil types must be considered. For example, a property on a high dry sand ridge would cost more to buy but much less to develop your riding arena. Just scrape off the grass and away you go.

A property on a low lying flat site with Manitoba gumbo for soil and little drainage would be more affordable to purchase but cost a great deal to develop a riding arena; it would likely not be worth the investment required.

Then there is everything in between.

## Improve drainage

The drainage and soil stability of any property can be improved. Here are some hints.



**V**isit your local agricultural office as there may be programs available to assist you with drainage improvements.

**D**ig ditches or trenches to help remove excess water from your property during the spring thaw before it has a chance to soak in and saturate the ground. Be careful not to cause erosion and be sure that these ditches drain completely so they do not become a breeding ground for mosquitoes. (Permits will be required so talk to your local development officer.)

**I**nstall a tile drainage system or French Drains. These may be required under certain conditions and will need to be done by a professional.

**S**tabilise the ground in high traffic areas at gates and around automatic waters. This can be done by excavating the problem area at least 8 inches (a foot or more would be better) and installing first a geotextile fabric (not filter cloth) then rock, then gravel, then some sand or crushed limestone for a top dressing.

## Outdoor riding arena

One of the most important areas on your property to be drained and fit for constant use is your outdoor riding arena. The footing is the single most important aspect of your riding arena, and good footing relies on good drainage. There is nothing more important to the health, safety and performance of both horse and rider than the ground they are riding on.

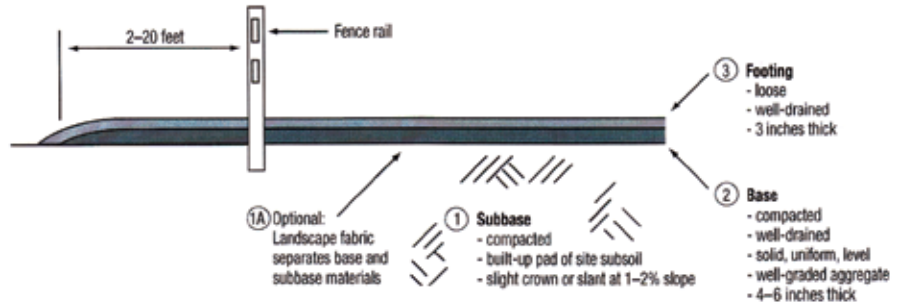
What defines a properly constructed arena footing will depend upon the underlying soils and whether or not your arena is covered. Your arena footing should be designed specifically to match your site and riding discipline. Riding arena construction is a job for the professional, but you still need to know what you are riding on; the following are generalities and meant as a guide only.

### How it's built:

- The sub-base for your outdoor riding arena provides stability to the ground underneath and drainage. It will be similar in both construction and cost per sq. ft. to your gravel driveway. If you can't drive your truck on your arena after a rain without damaging it you won't be able to ride your horse either. Depending upon arena size, elevation and underlying soil, tile drainage may be required. Your sub-base will also need to be either sloped or crowned to promote runoff. (An indoor arena's sub-base should be flat as no drainage will be required.)



French drain, simple system: perforated pipes run in straight lines, the length of the arena.



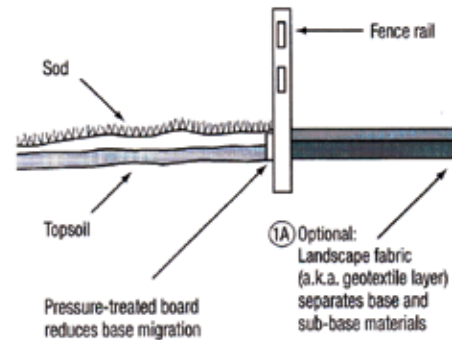
The footing material is only the top layer of riding arena construction and is dependent upon the support of a suitable sub-base and base. Shown above, an arena with a supporting sand edge; below, a board/turf construction to keep footing material in place inside the arena!

- Next would be the base. A layer of geotextile filter fabric is used to keep the coarse rocks and gravel in the sub-base from coming up into the base and causing potential injury to your horse's feet. Then the base is installed; a 2 inch layer of limestone screedings or crushed rock packed to a hard uniform surface.

This uniform base is what protects your horse's legs from becoming injured by insuring that there are no surprises for them under the riding surface when traveling around the arena. This is especially important when asking your horse to jump, stop, or turn around hard for instance in ranch work.

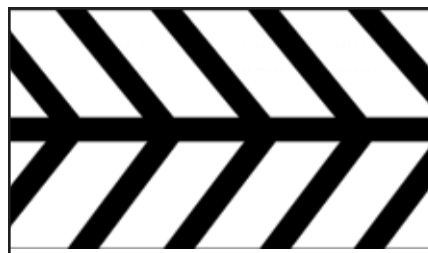
- The last layer to be installed will be the riding surface, typically made up of mostly sand with a little clay but can be anything from wood chips to ground up tires.

Sand is the most popular choice with good reason. It's readily available anywhere, and with the exception of show jumping and polo, is the footing



used in nearly every type of equestrian competition. (Train on what you show on.)

Be aware all sand is not created equal so do your research. The depth and ratio of sand to clay will depend upon your riding discipline. For example a cutting horse needs a deep loose footing to provide cushion for their joints during the hard stop and turn required to handle a fast running cow, while a jumping horse will need a firm footing with some spring that won't absorb its energy during the push off phase of their jump and provide just enough cushion for the landing. Find out from a professional in your area of interest what kind of ground they prefer and why. For an indoor arena I would recommend cleaned sand free of fines treated with an agent to help eliminate dust. Silica dust is hazardous to the health of both you and your horse.



French drain, herringbone system: perforated pipes run from a central pipe to drain the water away from the arena.

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## Maintain your arena

To get the most out of your riding arena it will require proper care and maintenance. Most importantly protect your base: it's what protects your horse. Here's how:

- Drag your arena regularly to aerate the riding surface and prevent the formation of deep ruts or a track, which will damage the base. Make sure your drag only penetrates to the depth of your riding surface and no more. If your sand is 3 inches deep make sure whatever you use to drag your arena can't go any deeper than 3 inches.

- Do not use the arena if it's wet. Your horse's feet will punch through the riding surface and into the base. When it dries out there will be dangerous uneven surfaces and holes under the riding surface. If your horse jams a leg in one of these holes a couple of times they will quit stopping for you. If your arena has been built properly it will dry quickly and you know you will be better waiting a day or two.

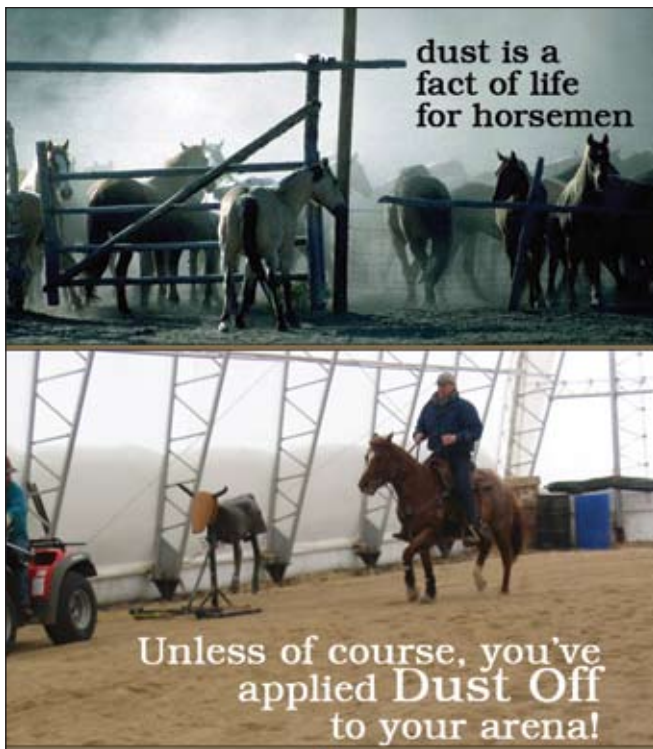
- If your arena is holding water for more than a couple of days you have a problem and should consult a professional to help you decide upon the best course of action.

- Clear excess snow from your arena before it thaws and you will be riding much sooner than if you just wait for the snow to melt and then for your arena to dry. Be careful not to remove your sand.

Arena building is a complex art and it is best to hire a qualified contractor that understands horses and what you are trying to accomplish. There are virtually no cost savings in attempting to do it yourself, as the delivered materials (sand and gravel) make up the lion's share of the cost and that's not going to change. Arena construction (even outdoors) requires the use of heavy equipment, surveying and levelling tools and is not for the DIY person. 🐾

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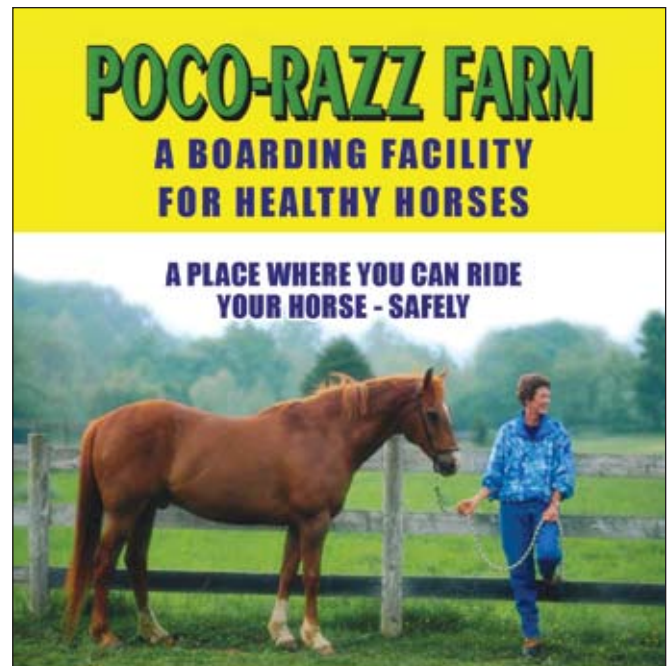
*Lee Smith owns and operates Acreage One. They provide Acreage Planning and Development, Landscaping, Agricultural Fencing, Buildings and Skid Steer Services and can be contacted at [lee@acreageone.ca](mailto:lee@acreageone.ca)*



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