



Maintaining a Turfgrass Riding Surface

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There are many questions in the show jumping world as to what is the best riding surface for the horse and if you asked ten different riders from around the globe, I would expect you would get at least six or more different opinions. In my opinion there is nothing better than what Mother Nature can provide in a well-established stand of turf grass.

Spruce Meadows prides itself in having some of the best grass riding surfaces in the world, however those high quality riding surfaces do not come without a lot of care and attention through an intense maintenance program. Even though Mother Nature knows what she is doing, it never hurts to give her a little bit of a hand along the way.

A proper maintenance program incorporates all aspects of Turfgrass management. This includes fertility, irrigation, soil structure, mowing, choosing a suitable grass type based on geography, and several other seasonal cultural practices.

FERTILIZATION

To start off with, a proper fertility program must be developed around the actual needs of the plant. It is true that the main nutrients that plants need to flourish are nitrogen, phosphorous and potassium (collectively referred to as NPK) but there are many other micro-nutrients that can be contributing factors to the good or bad health of grass. A good rule of thumb, however, is to feed the plant a higher nitrogen value during the growing season to produce shoot growth, and a higher potassium level in the fall to help develop strong roots and winter reserves for the plant.

In show jumping arenas, the focus should be placed on the development of a strong root system. The roots are the key to what holds the footing together and allows for the high impact of horses jumping and turning on the turf. All components of the structure of the footing are important, but without roots there is nothing to hold the ground together.

IRRIGATION

Another key component of the health of a plant is a proper water supply. This may be the most important factor in maintaining good show jumping footing, but it can also be the hardest to control. Irrigation is the only component of the soil profile that can be altered quickly to change the firmness of the footing. Mother Nature is so unpredictable and she can decide to unleash her fury overnight with a deluge of rain that we have no ability to stop. Hence, Nature's input can affect the firmness of the footing without our control.

Each riding surface will need different moisture content to produce the best footing conditions based on what makes up the soil structure. A footing containing more sand will require more moisture, whereas a higher organic matter soil footing will require less moisture to provide optimum conditions. While the health of a plant may not much more than 1" of water per week, the footing may need more than that if the surface is to be ridden on. Again, this depends on the type of soil structure you are dealing with.



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SOIL STRUCTURE

The structure of the soil will alter many of the other cultural practices that are performed on the riding arena throughout the year. It is important to understand the percentages of sand, silt and clay in your profile. If the footing consists of a high percentage of silt and clay, it may have a higher nutrient content but it will not have a good allowance for drainage, and in turn it will be slippery and loose when it is wet. A higher sand content will improve drainage.

MANUAL MAINTENANCE

In addition to irrigation, there are several methods of enhancing the riding surface manually. These may include aeration, verticutting, topdressing, sweeping, rolling, drag matting, de-thatching and mowing. The most familiar of all of these practices to most people would be mowing, as many of us have had to mow our own lawns. While mowing may appear to be a simple task, there are some things to consider before mowing your turf. Firstly, it is a good rule to never cut off more than 1/3 of the total leaf blade at a time. Cutting more than this can cause stress to the plant and adversely affect the health of the grass.

If you have seen our turf rings here at Spruce Meadows you may have noticed that there is a striped or checker board pattern to the grass. This is something that we do purely for the aesthetic value that it adds to our rings. Additionally, changing the mowing pattern can help ensure there is no wear pattern in the footing from the mower itself. To maintain this look as well as the height of cut that we desire, the rings are cut as many as six times per week in the peak of the growing season. The height of cut may be determined by the species of grass selected, but we have found that a height of 1 7/8" works the best for us.

Topdressing has been a major part of our maintenance program here at Spruce Meadows. This is the act of adding sand to the surface of the turf. This has allowed us to change the surface material that the horses are riding on to more of an all weather surface. Over the life of the International ring there has been as much as 8" of sand added to the surface from where the original level of the ring was 40 years ago!

PRE-SEASON AND POST-SEASON DUTIES

There are a few additional considerations that are important for both before the outdoor jumping season begins, and once it ends and we prepare for winter. The spring preparations set the ring up for the whole season and are therefore very important. During this time tasks such as verticutting, aerating, over-seeding, and patch repair will be done. Verticutting is the removal of the dead grass and clippings from the thatch layer in the turf; these can build up throughout the season, and the spring is the best time to deal with it. Aerating in the spring allows oxygen to get to the roots of the plant and also helps to alleviate any soil compaction issues. Winter desiccation can occur during the harsh cold temperatures causing dead patches on the ring. Over-seeding in the spring can help to re-introduce the plant species that you want into these bare patches. Some of these patches may require a more intense approach by means of re-sodding. The sooner that you can do this repair work the better, as the sod needs enough time to root itself to the ground well enough that the turf will be safe to ride on.



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In the fall the grass begins its hibernation mode. Storage of nutrients is a natural process that the plant will do. In an effort to help this process along, a fall fertilizer application of a higher potassium level is given to the plant to help develop strong roots and winter reserves. Other winter preparations that are done at Spruce Meadows are a further top-dressing of a thin layer of sand to the turf, and covering the turf with tarps. These will serve as a bit of a protective layer to the crown tissue of the plant shielding it from the fluctuation in temperatures that can be seen in the Calgary region, and it will also help alleviate the thatch layer that may have developed throughout the season. The tarps will also provide a greenhouse-type cover to give the turf a head start in the spring.

As with many aspects of the sport of show jumping, a lot of work behind the scenes has to happen in order to produce what gets seen in the competition arenas, and turfgrass footing is no exception. With a proper management program in place to deal with the difficult growing climate in Alberta, a spectacular grass footing arena can be attained!