Hard surfaces can help reduce mud

Source: Steve Higgins, director of environmental compliance for the Kentucky Agricultural Experiment Station

If you have been farming in Kentucky for any length of time, you know the winter weather can make your farm quite muddy. Feeding livestock during the winter or moving equipment over unfrozen, wet ground can exacerbate the amount of mud on the farm.

Mud is not good for several reasons. It can cause topsoil erosion and increase soil compaction. Livestock that have to walk through mud require more feed for energy but actually eat and drink less because they expel so much energy getting to feed and water. Therefore, mud reduces daily average gains. Mud on animal’s coats makes it harder for them to regulate their body temperature−increasing the amount of energy they need to generate heat for warmth in the winter and cool themselves in the summer. For horses, mud can increase the risk of slipping and falling and can make walking or standing difficult.

Fortunately, you can reduce the amount of mud on your farm by installing hard traffic pads on areas of your farm that tend to get the most traffic.

You have many choices for materials to use for heavy-use pads. Some of these include concrete, plastic traffic grid and geotextile fabric and rock. The material you use depends on many factors, including material availability, installation costs and the size of your operation.

With the exception of horses which require softer surfaces, concrete pads are by far the strongest, easiest to clean and lowest maintenance material for most livestock producers to use. Concrete pads should be placed in areas that receive heavy animal traffic, such as around waterers, adjacent to feed bunks, in holding areas and near gates. While the installation costs of concrete pads may be higher than other materials, you are going to save money in the long term, because you reduce the amount of wasted feed and get better gains on your livestock.

The thickness of the pad will depend on the type of livestock you have, stocking density and whether the area also gets a lot of equipment traffic. Areas with livestock traffic require a pad that is at least 4 inches thick placed on several inches of gravel. Trucks, tractors and other heavy equipment need concrete pads at least 5 to 6 inches thick.

A hilltop or sloped surface is often the best location for a hard surface pad, as they tend to be away from most waterways and will allow nearby vegetation to filter stormwater runoff. Make sure the location also drains away from feed bunkers, waterers and roads.

Concrete pads need to have a solid foundation to be successful. Prepare the site by removing topsoil until you reach soil that is easily compacted and make sure the area is level. Use at least 6 inches of compacted dense grade aggregate to provide a solid base for a concrete pad. Inadequate foundation preparation can cause a concrete pad to fail or freeze or damage water pipes.

Horse owners should similarly prepare their sites but should construct their pads using geotextile fabrics followed by 6-inch layer of crushed limestone and finished with 2-to-3 inches of dense grade aggregate. Create a more durable surface by compacting the dense grade aggregate using a small, smooth-drum roller like those used for asphalt projects.

More information about installing hard surfaces on your farm is available in the University of Kentucky Cooperative Extension Service publications AEN 115: Appropriate all-weather surfaces for livestock and ID-164: High traffic area pads for horses. They are available online at <http://www2.ca.uky.edu/agcomm/pubs/aen/aen115/aen115.pdf> and <http://www2.ca.uky.edu/agcomm/pubs/id/id164/id164.pdf> or you can get a hard copy from the (COUNTY NAME) Extension office.

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