

“Mono-Slope Beef Barn Design and Management”

May 17, 2013

The webcast is archived at:

<http://www.extension.org/pages/68165/mono-slope-beef-barn-design-and-management>.

Are there any concerns about snow loads on the barn roofs?

Ron Christensen: I have not had trouble with snow load on my mono-slope building roof – the snow tends to blow off. I’ve had more problems with snow on gable roofs.

Nick Mack: No. Our engineer designed it for uplift from the south wind. He’s more concerned about uplift than snow loads.

Kris Kohl: Our buildings are designed at 25-30 pounds per square foot of ground snow load, which is about 3 feet. This is also an 80-mile per hour wind load. The mono-slope roofs rarely catch any snow load.

Scarifying solid floors was mentioned. Are there any special consideration on the depth of scarifying and spacing?

Ron Christensen: The concrete need to be scarified, but too little or too much can cause problems. Too little and the surface remains too slick and cattle will slip; too much and the cattle will have sore feet. I used a roller with 1/2 inch rod and 6 inch spacing to scarify the concrete. It’s a tricky process because how quickly the concrete cures can vary a lot. Make sure to not only do the lot surface, but also all cattle walkways and alleys.

Nick Mack: I have a bull float with ½ inch square key and 6 to 7-inch spacing.

Kris Kohl: The floors need to have at least a 1-foot x 1-foot diamond pattern to help improve footing and drainage. Any coatings beyond curing are destroyed by heavy traffic load.

On the slatted floors, mats were mentioned; do you have any recommendations on types of materials?

Beth Doran: As far as I know, there have not been any university research studies published that examine the types of materials. Iowa State University Extension does have a trial in north central Iowa looking at mats on slatted floors and their effect on animal performance, health and structural soundness. Currently, this research is still in progress.