PIPESTONE Veterinary Clinic

The Roof Isn't Falling In...So Far

Today's newer hog barns are built much wider, so the chance of damage from a load of heavy snow has increased. As the winter drags on, Paul Ramsbey, Pipestone System director of safety and maintenance, advises producers to keep track of the white stuff on the rooftop.

This year roofs are collapsing and producers are wondering why. Paul knows the answer—more than one answer, actually. "Years ago, roof trusses were designed to support 20 lbs. of weight per square foot. Today's trusses will support 30 lbs. per square foot but that figure assumes that sort of load once every 50 years."

This winter, buildings are supporting that worst-case scenario snow buildup not for a day or two but for weeks. "Builders design trusses to support a snow load for 60 days over the life of the building. Every day your structure exceeds its snow load shortens the building's life," Paul explains.

And then the roof could decide to fall. Paul knows this from experience because "we had Pipestone pigs in a barn somebody else owned and the roof collapsed." (See photos at right.)

Watch for these contributing factors

- Be observant if you have one of the newer, wider barns. “Our first barns were 60-feet wide; now we’re building 100-feet wide,” says Paul Ramsbey. “New barns have less pitch and more roof surface area to hold snow.”
- If you constructed a good windbreak around your hog site, you’ll also likely have more snow on your roof. Trees stop the snow and it lands on the roof.
- Keep track of time. Here is Paul’s rule of thumb. “If you have a big snow fall tonight on a clean roof you aren’t out of the woods just because the building is still standing tomorrow. Stay watchful if the snow load continues to build. Paul has also seen buildings where the snow load is all on one side but roofs aren’t designed to support unequal weight.
- Consider the water content of a recent snowfall. If you’ve had a lot of snow coupled with freezing rain, your roof is supporting a weightier load.
- Check your lateral braces. Sometimes those aren’t properly installed from the very beginning. Maybe teeth in metal truss-plates weren’t aligned or have rusted over time. “If one rafter goes down, the others will crash like dominos,” Paul warns.
- Keep snow from piling up against the building. That creates a slalom that enables snow to slide straight across onto the roof.

How should you deal with the rooftop snow?

If you suspect your roof could be unstable, scan the building exterior for buckled roof or walls. If you suspect roof instability, do not go inside!” Paul cautions. “You can’t protect your livestock if you’re injured.”

Don’t go up on the roof to remove snow, either. By standing on a snow-loaded roof, you might damage your building or yourself. Hiring someone who will use the right equipment and operate from the ground is your safest bet.

There are construction companies that will remove snow using a cherry picker and snow rakes. Contact Paul Ramsbey at 507-215-0494 for more information about companies with the right equipment or ask at your local lumberyard.