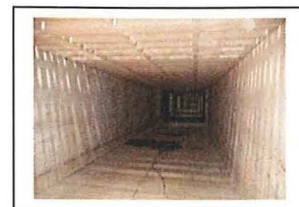


As an owner or producer, selecting a site for a waste storage facility involves many considerations. If you are considering putting the storage under any animal housing facility, consider the following pros and cons prior to making your final determination.

Pros:

- Reduced hauling costs. Excess rainfall not collected.
- Space savings under tight land conditions when the storage is under the barn.
- Elimination of bedding for stalls.
- Decreased cost to operate and maintain (No bedding and manure collection costs).
- Under normal weather conditions concentrations of manure gases should be below harmful limits.
- Lower energy usage for movement of manure. Manure falls directly into the storage.
- Less environmental impact from reduced volume of wastes and variability on storage volume since rainfall collection is optional.
- The waste storage and odor are both “hidden from sight” from others and shielded from natural air movement.

**Cons:**

- More costly for the original waste structure construction.
- Higher, up-front cost per stall to provide a non-organic bedding surface.
- Sand bedding is not an option.
- Naturally ventilated facilities suffer air quality issues during a weather inversion. During agitation and unloading, animal removal may be required along with no human entry.
- Stray sparks from torches, welding equipment and small internal combustion engines can result in ignition of explosive gases located just below the slats.
- Power outages in tunnel ventilated barns during hot weather raises the potential of manure gases accelerating the effects of heat stress on all occupants.
- Close proximity of manure gases may accelerate corrosion of metal components of barn
- High manure odors may occur inside barn, as the animals are housed directly over the manure storage. Ammonia, carbon dioxide, hydrogen sulfide, and methane all can be fatal to both animals and humans in high concentrations.
- Livestock health, especially young stock, may be affected by sub-lethal exposure to gases.
- Dangerous gases can be present in high concentrations during agitation. No human or animal entry into barn during agitation is recommended
- Addition of sulfur products to the manure produces increased hydrogen sulfide gases which would be in close proximity to the animals (gypsum, silage leachate, etc.) and potentially deadly during agitation.
- Possible cow adjustment period and health issues during a transition to less bedding in stalls and increased time spent on slats.
- Agitation of the manure and solids removal is more difficult under a covered storage. A dilution water source is needed and must be managed to facilitate removal.
- Requires a greater awareness on the part of the producer and the workers in the barn of the behavior of stored manure and how it can affect them and the animals housed over it.



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