

# Parlor retrofits require thought, planning

By Vance Haugen

**Editor's note:** Vance Haugen is extension agriculture agent in Crawford County, Wisconsin, and he helps his wife, Bonnie, manage an 80-cow dairy near Canton, Minnesota. The Haugens milk cows in a 16-unit "swing" parlor that they installed in a tie-stall barn, and Vance has helped plan and build dozens of similar facilities. This is the second of two parts offering his thoughts on what makes a good, inexpensive parlor retrofit.

## Lighting the parlor

More light (lumen) is good. If you are going to put in eight-foot fluorescent lights, put the fixtures perpendicular to the pit length. As the cows are standing at a 70-degree angle, the light can get between them and help you see. This goes for fans also. Position the fans so the air pushes between the cows, and not just over them.

## Sloping, shaping the holding area

Fifteen square feet per animal is perfect for the holding area if you don't have the animals in there longer than two hours. The best holding areas are flat, gently slope (2-3 %) away from the parlor, and are very well ventilated. If your topography and/or farmstead layout is such, having a holding area with no roof (or, in some cases, walls) is great for the cows and for reducing clean-up time.

A holding area with a Mt. Everest slope is a disaster. One parlor I know of had a great design, but the holding area was sloped at approximately 15%. That means there was a 7.5-foot rise in 50 feet. This farmer could get cows in the parlor, but just barely. He had to spend a lot of time keeping the area clean so the cows wouldn't slip and slide into the next county.

Second of  
two  
parts

A bigger entry to the holding area is a lot better than a narrow one. No steps are a lot better than steps (that also goes for the exit area). Also, a "Y" or "T" or "L" shaped holding area can be done, but they are not efficient because your crowd gate doesn't work as well as it should. (I recommend crowd gates. Lightweight ones can be installed cheaply, and are well worth the investment.) Also be aware of airflow. If the holding area is not ventilated in the winter, cows can get pneumonia if they are brought from dry, cold air outside into the moisture-laden air of the holding area.

Manure handling from the holding area (and cow exit area) should be planned so that a skid steer can keep things clear. While I've heard that hand scraping is good for the soul, I believe it reduces quality of life.

## Exit gates are up to you

Exit gates can be any style, but you must decide how you are going to handle animals. On smaller parlors (eight units or less), almost anything will work as long as the cows are treated as milking animals, and not wild rhinoceroses. Avoiding pinch points and anything that can band up a hip is a good rule of thumb. A pendulum "chop gate" is necessary at the front if you don't wish to have an entrance gate. Having only one gate *can* make for faster throughput, but only if all other aspects of the system are optimized. A functional exit gate is anything that swings, folds or slides completely out of the way.

## For exit area, straighter is better

A screwy exit scheme is the kiss of death for efficient cow flow. The best exit from a parlor is straight out — a shotgun blast. The second best parlor

exit it a 90-degree turn with enough cow-exit buffer space to accommodate your entire platform of cows. The last choice is a 180-degree return lane to the holding area. More space (10-12 feet from parlor exit to door) can relieve some problems if the exit or return lanes are too small and narrow, giving space for cows to slip around a slow animal. However the cows get out, be sure to have water for them after they exit.

## Cleaning in place necessary in larger parlors

Having a clean-in-place (CIP) system versus washing units in the milk house is about a coin flip on a small parlor (swing six). Over this number of units, you may wish to put in CIP. If you consider CIP, be sure to plan on putting a lip on the cow platform under which you can hang the CIP wash cup. Adding CIP to the old tie-stall barn will add \$4,000-\$5,000 to the swing parlor retrofit because you must be able to wash the parlor as you would your milk house. Many farmers with CIP opt to reuse the pipeline cleaning water to clean the parlor. This recycling cuts down on the number of gallons that must be stored or treated.

## Design for quick clean-up

A flush system is an excellent three-season system in the North, but you do have a problem with needing a large amount of storage in the winter. Have several drains (one per 10 feet of length on the cow platform and pit floor) in the parlor so you don't have to chase a cow pie the full length of your parlor with a water jet or scraper. This can greatly reduce cleanup time. Parlor wash water should be stored or, at the very least, storage should be planned for. Right now approved grass filter strips and settling basins can receive manure from the parlor. I believe regulations will soon require all such waste be stored. Indeed, future regulations will stop some retrofits in their tracks.

## Think and plan!

Think outside the box. Be creative. Concentrate on cow flow. If the cows won't flow, let it go. Building your own parlor can be a great experience. But if you don't like details, don't do it yourself. Being your own general contractor can save you money but only, *ONLY* if you know what you want. That means knowing your goals, and following through.

Visit some farms that have already installed such parlors. Hash out your plans, on site — preferably with people who have built and milked in these parlors. Having one person give advice can get you a good design, but it's even better having a group review your ideas.

The University of Wisconsin-Madison has a standard plan for swing parlors. Contact Dave Kammel, agricultural engineer, at 608-262-9776; or write UW-Madison, 232C Ag Engineering Bldg., 460 Henry Mall, Madison, WI 53706-1561, or e-mail him at: [dwkammel@facstaff.wisc.edu](mailto:dwkammel@facstaff.wisc.edu)

Kammel's paper on swing parlors is on the American Farmland Trust Web site at: [www.grassfarmer.com](http://www.grassfarmer.com) That site also has pictures of parlors.

I'm ready to help, too. Contact me at 608-326-0223; or write to 111 West Dunn St., Prairie du Chien, WI 53581, or reach me by e-mail at: [vance.haugen@ces.uwex.edu](mailto:vance.haugen@ces.uwex.edu)

For what it's worth, there's a picture of our parlor on this site: [www.mdcanvas.com/sofdoor.html](http://www.mdcanvas.com/sofdoor.html)

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