

Holding Pen Management – Improving Cow Comfort for the Dairy Herd

By: Katie Wolf and Donna M. Amaral-Phillips, Ph.D.

The holding pen is a necessary part of most dairy operations, and cows spend a considerable amount of time in the holding pen, especially if they are part of a large group. However, the holding pen can be a stressful location where a cow is not productively investing her time. Here are some tips to maximize cow comfort within the holding pen.

- **Minimize time spent in the holding pen.** Any time a cow does not have the options of eating or resting is time that should be minimized. This may seem obvious, but accomplishing the task is easier said than done. Ideally, cows should spend no more than an hour at a time in the holding pen. Cows that spend 6 hours a day in the holding pen produce 5 to 8 pounds less milk than those that only spend 3 hours a day in the holding pen. This time can most easily be reduced by bringing up fewer cows at a time or simply making cow groups smaller. Moving cows more efficiently through the parlor can also result in more turns per hour and ultimately get cows out of the holding pen faster and back to a more comfortable area where they can eat or lie down and rest.
- **Ensure adequate and safe footing.** Holding pens tend to accumulate waste very quickly. Wet areas increase the likelihood of foot problems, such as foot rot and digital dermatitis (hairy heel warts). Further, this waste can make a slick floor even harder to stand and walk on. Grooved flooring, especially in a diamond pattern, is most critical in the holding pen area as it reduces injuries from slippage and cuts down on cow stress. Rubber mats must be used with care; they offer a softer surface than concrete for a while, but must be replaced as they harden.
- **Focus on heat abatement.** If there is any place heat abatement should be a priority, it is the holding pen. Cows gathered that closely together generate a lot of heat, even if it isn't already hot. At a temperature-humidity index (THI) of 68, heat stress begins to kick in. This can be reduced through the use of fans, shade cloths and sprinklers. Fans and sprinklers can be set to automatically come on at 68 degrees, and the intensity can even be adjusted for the weather. Fan speed can be increased as temperatures increase, and sprinklers can turn on more frequently with higher temperatures. Sprinklers should provide just enough water to soak the skin, without running onto the udder to minimize bacterial movement. A 36" fan can cover 20-30 feet length; a typical holding pen will utilize 4 fans of this size, but measurements should be used to ensure this is adequate coverage for your farm and enough rows of fans are present. In addition to fans and sprinklers, radiative heat transfer can be minimized through the use of 80% shade cloths along the sides of the holding pen where the sun typically hits. However, care should be taken in placing them so as not to also decrease air movement.
- **Use crowd gates with care.** The main purpose of crowd gates is to maintain proper space in the holding pen for the number of animals. They should not forcibly push cows or shock them, but be used as a tool to encourage cows to move into the parlor so milkers can stay inside more, chase cows less, and ultimately move cows through the parlor faster.