

Understanding Dairy Cow Lying Behavior

By Lindsay Ferlito

Almost all dairy producers agree that a cow that gets more rest (spends more time lying down) will be healthier and produce more milk. Although lying time and behavior are topics that have been discussed for years, researchers continue to discover new information on how important lying time is and all the factors that can affect lying behavior at the cow and herd level.

In addition to data collected from controlled research, technology is now commercially available to track individual cow activity, steps, and lying behavior on farm. This allows producers to flag cows that have large changes in behavior and activity and monitor them for other potential issues. Lying time requirements and behavior (including lying bouts which are the number of times a cow gets up and down each day) vary from cow to cow and can change over time depending on a cow's production level, health status, and stage of lactation. On average, mature lactating cows lie down 10-12 h/d, dry cows lie down around 13-14 h/d, and in the day or two before calving lying time decreases and the number of lying bouts increase. Data from the Miner Institute suggests 1 hour of additional lying time could be worth about 3.5 lbs of milk/cow/d, so whether or not you can measure lying time on your dairy, it is still a good idea to evaluate your facility and consider making changes to improve lying time.

- **Improve stall base:** Cows prefer a soft, well-bedded lying surface. Cows have higher lying time and fewer, but longer lying bouts on deep-bedded stalls compared to mattresses. Fewer lying bouts suggest that once she is in the stall and lying down she is comfortable and prefers to remain lying down, compared to a cow that keeps shifting position up and down to get comfortable. Additionally, lame cows will spend more time lying down on deep-beds, which allows them to get off their feet to rest and recover.
- **Improve bedding:** In all types of stalls (deep-bed or mattress), lying time is higher when there is more bedding. Cows spend more time lying down when the bedding is well maintained and kept level, clean, and dry.
- **Reduce stocking density:** Studies indicate that lying time can be reduced when stalls are overcrowded, even at just 109% stall stocking density.
- **Improve stall size:** Design your stalls based on your cow size. Lying time increases when stalls are longer and wider, and when brisket boards are removed or made less aggressive.
- **Implement heat abatement strategies:** Lying time and production are higher when heat stress is minimized through the use of fans and sprinklers throughout all stages of lactation.
- **Reduce time spent in holding area:** Cows only have 24 hours in a day to get everything done. They spend about 11-12 hours lying down, 3-5 hours feeding, 5 hours standing in the alleys and stalls, which only leaves about 3 hours per day for milking. This means cows need to get from the pen through the parlor and back to the pen in less than 3 hours total each day. When cows have limited time in the pen, they will be forced to choose between resting and feeding, both of which are necessary to keep them healthy and producing well. Reducing time spent in the holding area can increase lying time and production.

