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The future of dairy production is going to rely heavily upon providing the optimal environment for cows and young stock. Environment plays a major role in the ability of our animals to express the genetic potential that has been selected for through breeding. Numerous examples of the incredible genetic abilities of dairy cattle can be seen when the cow's environment does not constrain her performance. Holstein herds averaging 100lbs of daily production per cow, or Jersey herds averaging 75lbs are examples of this potential being expressed.

Here, environment refers to more than just the temperature and humidity of the air our cows are breathing. Environment refers to many other dairy management inputs, such as stall design, bedding, stocking density, ration, time spent away from resources, and even the interactions with humans experienced by the cow from day to day. These are the management inputs that are very much under our control and can be manipulated for the benefit of the cow, her health, her productivity, and dairy profitability.

Consider cow time budgets on your dairy. Whether you are tie stall or free stall, your cows lose access to key resources such as water, feed, and a place to lie down, at certain times of day. Cows may be in a holding area away from all their resources other than herd mates, or their mangers may be cleaned once a day preventing access to feed. Cows rest for 12 to 14 hours per day and eat for 5 to 6, drinking and walking around the pen to socialize takes at least another hour. If you consider how much time is spent milking a group of cows, the 24 hours in a day can be used up very quickly.

Lying time is arguably one of the most valuable resources to the cow. Lying time is a necessity for the cow's time budget and leads not only to better cow wellbeing but also higher milk yield, higher feed efficiency, lower incidence of lameness, and better reproductive performance. Cows will sacrifice feed intake, and other activities like heat expression in order to achieve the resting time they need.

In a study of elite cows within an average herd, the cows that produced the most milk spent 14 hours per day resting, while the average resting time for the whole herd was 12 hours per day. Each hour of additional resting time resulted in an average of 3.5 lbs of additional milk per day. This relationship was confirmed in a stocking density trial at Miner Institute where the entire pen of cows rested an average of 1.1 hours less when their stocking density was increased from 100% (cows per stall) to 145%, and the pen's average daily milk yield dropped from 94.6lbs to 91.3lbs.

In conclusion, the cow's environment has a huge influence on her performance. Attention needs to be given to the cow's daily time budget, with management decisions that provide adequate resting time so that health, productivity, and profitability are not constrained.