

FACTORS INFLUENCING HEAT DETECTION IN DAIRY CATTLE

TABLE 3: FACTORS THAT INFLUENCE DETECTION

COW FACTORS	
Genetics	Positive sire fertility breeding value traits are associated with increased estrus expression
Days in milk	Silent heat (more correctly, silent ovulation), is common at the first ovulation after calving.
Lactation number	The more lactations the cow had, the less fertile she may be.
Milk production	There is an inverse correlation between estrus expression and milk yield
Lameness	Lameness is classically associated with a reduction of estrus intensity.
Hormonal treatments.	Progesterone increases the sensitivity to estrogen and usually results in increased estrus expression.
ENVIRONMENTAL FACTORS	
Season	A depression in estrus expression during extreme temperatures and humidity.
Nutrition	Unbalanced rations (protein, energy, minerals, etc.), Body Condition (emaciated or obese) and the presence of mycotoxins, especially vomitoxin and zearalenone can negatively affect estrus expression and fertility.
Housing	The type of floor surface affects estrus behavior. For example, a slippery floor will discourage the animal from mounting and other estrus-related behaviors.
Herd size and over-crowding	The number of social interactions between cows is greater when the herd size is larger. However, over-crowding will reduce expression of estrus by limiting the space available for socially active groups to form and interact.

Reference:

C.B. Reed, B. Kuhn-Sherlock, C.R. Burke, S. Meier, Estrous activity in lactating cows with divergent genetic merit for fertility traits, *Journal of Dairy Science*, Volume 105, Issue 2, 2022, Pages 1674-1686, ISSN 0022-0302, <https://doi.org/10.3168/jds.2021-20811>.