

# WVS MILK QUALITY

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## The Summer Surge: State's Highest SCC - July Through September

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Wisconsin's somatic cell counts (SCC) reliably spike during the summer and early fall (July through September) due to severe heat stress and elevated environmental humidity. Keeping counts in check requires proactive herd management, aggressive cooling, and meticulous parlor hygiene to prevent environmental mastitis from eating into your quality premiums.

Across the state, dairy herds traditionally experience their highest bulk tank SCCs during the late summer. Even though Wisconsin farmers generally beat the national average for milk quality, summer's heat and moisture create a dual-threat for herd health.

The summer jump in SCC is driven by two main factors.

The first factor is compromised immune systems. Cows face severe physical stress when temperature and humidity levels rise. High circulating levels of stress hormones (like cortisol) actively suppress the cow's immune system, making it harder to fight off bacteria.

Bacterial boom is the second factor. Warm, humid conditions are ideal for environmental pathogens (such as *E. coli* and *Streptococcus uberis*) to thrive in bedding and lounging areas. Teat ends are exposed to higher bacterial loads, resulting in a spike of new infections.

To prevent penalties and maximize milk quality bonuses, incorporate these actionable steps into your daily management:

**1. Aggressive heat abatement** - cows begin experiencing heat stress at just 72 degrees combined with 50% humidity.

- Ensure tunnel ventilation and natural airflow are maximized in your barns.



*Pictured at left are wall fans, free stall fans and sprinklers. Aggressive cooling is important to prevent environmental mastitis.*

- Install and maintain fans and sprinklers to keep cows cool but be careful not to over-soak the environment or stall beds.
- Provide fresh, unrestricted drinking water, as intake can increase by 50% during hot stretches.

**2. Parlor hygiene** - consistent, meticulous milking procedures are the frontline defense against environmental mastitis.

- Follow strict udder prep: pre-dip, wipe teats thoroughly using clean dry towels, and allow a 60- to 120-second prep lag time.
- Forestrip every cow to identify high-SCC quarters and keep that milk out of the bulk tank.



*Good teat swabs are pictured above.*

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- Post-dip consistently to reduce new infection rates by roughly 50%.

**3. Bedding and facility management** - keep bedded areas clean, dry, and comfortable to reduce teat-end exposure to manure and bacteria.

- Scrape alleys frequently and maintain 1 to 3 inches of clean, dry bedding in free stalls.
- If using sand, add fresh sand regularly and slope it to the rear of the stall.
- Eliminate organic debris, wet hay bales, and silage seepage areas that attract biting flies, which are notorious carriers of mastitis.



*It is crucial to have a proper bedding and facility management plan. Scrape alleys frequently and maintain 1 to 3 inches of clean dry bedding in free stalls.*

## **Bedding Cultures:**

### *An Underutilized Tool for Improving Milk Quality*

Clean, dry bedding reduces bacterial exposure to teat ends and lowers the risk of environmental mastitis.

The bedding surface is where teat ends spend many hours each day. Environmental pathogens such as *E. coli*, *Klebsiella*, environmental *Streptococci*, and occasionally *Prototheca* can thrive in moist bedding materials and increase the risk of new mastitis infections. Bedding cultures help identify pathogen reservoirs and guide management decisions.

Bedding cultures can identify coliform bacteria, environmental streptococci, *Prototheca*, and other organisms associated with environmental mastitis. Results help determine whether bedding is contributing to milk quality problems.

Consider bedding cultures when environmental mastitis increases, SCC rises, bulk tank cultures show higher environmental organisms, recycled manure solids are introduced, or seasonal mastitis issues develop.

Collect samples with clean gloves from the area where teats contact bedding. Sample multiple stalls within a pen and keep samples cool before laboratory submission.

Organic bedding materials generally support greater bacterial growth than inorganic materials such as sand. However, management is often more important than the bedding material itself.

Organic matter includes manure, milk, feed particles, straw, sawdust, recycled manure solids, and decomposing plant material. Bacteria require moisture, nutrients, and warm temperatures to grow. Organic matter supplies nutrients that support bacterial growth and increase environmental mastitis risk. As organic matter accumulates, bacterial populations can rise



*Clean, dry bedding reduces bacterial exposure to teat ends and lowers the risk of environmental mastitis. Pictured above is a great example of clean and dry bedding.*

dramatically, even when fresh bedding is added. Producers should evaluate whether stalls are damp, manure is accumulating, bedding is contaminated, or feed debris is present. Frequent grooming, removal of wet bedding, proper drainage, and maintaining clean alleys can significantly reduce bacterial exposure.

Don't just culture the bedding—evaluate the organic matter level. High bacterial counts are often associated with excessive moisture and organic contamination rather than the bedding material itself.

Reduce moisture, improve ventilation, groom stalls frequently, add fresh bedding regularly, and maintain excellent teat-end hygiene.

Milk quality starts where cows lie down. Bedding cultures are an inexpensive and valuable tool for identifying environmental mastitis risks and monitoring the effectiveness of management changes.