

Expose hidden mastitis in your herd with QScout[®] Farm Lab

Get fast, on-farm diagnosis to guide selective dry cow therapy with no loss in milk production or quality

Treating quarters for subclinical mastitis at dryoff helps prevent clinical mastitis and culled cows in the subsequent lactation. Selective dry cow therapy is an effective strategy, as long as infected quarters can be accurately identified.



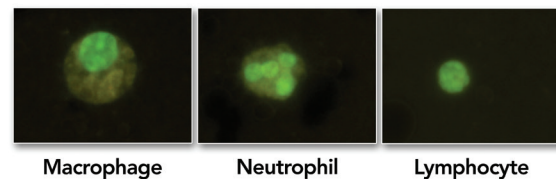
Challenge mastitis with a new breed of on-farm diagnostics

QScout[®] Farm Lab, a portable diagnostic analyzer, brings the fastest, most reliable diagnostics to the farm. It reads the QScout[®] MLD (milk leukocyte differential) test, accurately detecting subclinical mastitis in individual quarters in just minutes per cow. With the autoloader feature, the Farm Lab reads up to 20 MLD slides without supervision.

Identify infection by quarter

Modeled after blood leukocyte differential tests routinely used in humans and companion animals, QScout MLD identifies and differentiates leukocytes (white blood cells) in milk. Each of the three leukocyte types (described and shown in Figure 1) play a key role in fighting infection.

Figure 1. Fluorescent imaging differentiates leukocyte types.



The immune system's first responders: Lymphocytes and macrophages scout for pathogens; neutrophils fight infection by releasing enzymes that kill bacteria; and, macrophages engulf and digest cellular debris and pathogens.

QScout MLD accurately measures the immune response to mastitis and gauges the severity of the infection rather than relying on culture results, which are prone.

Unlike SCC, a relatively crude estimation of immune system status based on a composite milk sample, QScout MLD looks at each quarter individually for elevated cell types and cell type ratios that indicate infection.

Dryoff management strategies

Selective dry cow therapy at the cow level or quarter level

Selective dry cow therapy (DCT) is only treating cows that have an infected quarter – either at the cow or quarter level. This practice offers cost and labor savings to the dairy producer, while fostering efficient use of antibiotics. Selective DCT requires a rapid, accurate diagnosis of subclinical mastitis infections.

Studies compared blanket DCT with selective DCT – both at the cow and quarter level – based on QScout MLD diagnosis. **Selective DCT by cow level and quarter level resulted in similar culture positive rates after calving, similar SCC and similar milk production during next lactation compared to blanket dry cow therapy** (Figures 2 and 3).

Reduce treatment expenses and antibiotic use

Rapid, accurate diagnosis by QScout MLD at dryoff allows producers to strategically manage treatment costs when treating only infected quarters/cows. Additionally, selective DCT promotes the judicious use of antibiotics, a topic of increasing importance.

In trials conducted by AAD, selective DCT leads to:

- Reduced treatment costs and labor savings
- **A 59% reduction in antibiotic use** when selectively treating quarters at dryoff¹
- **A 47% reduction in antibiotic use** when selectively treating cows at dryoff²
- An opportunity to consider more expensive mastitis treatment tubes that offer extra benefits

Information that counts

With each test performed, individual cow health data are collected and tracked in QStats. While treatment lists can be printed or downloaded directly from QScout Farm Lab, test analyses and historical reports are stored and accessible with an online QStats portal. QStats empowers better decision making and smart herd management strategies.

Quarter-level selective dry cow therapy

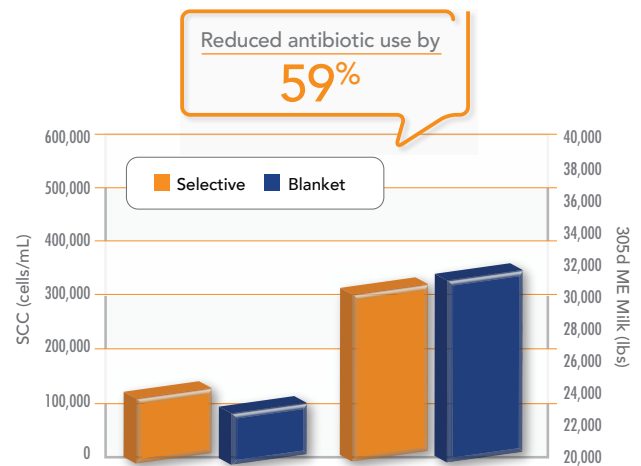


Figure 2. Milk records show that cows that were blanket or selectively dry treated by quarter had similar monthly DHIA SCC and 305d ME milk in the subsequent lactation.

Cow-level selective dry cow therapy

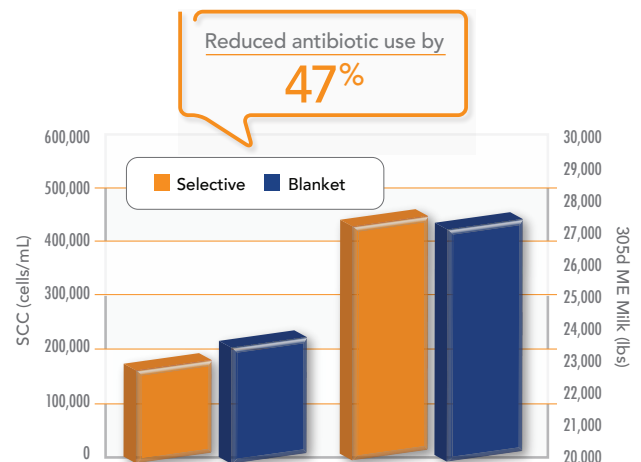


Figure 3. Milk records show that cows that were blanket or selectively dry treated at cow level resulted in similar monthly DHIA SCC and 305d ME milk in the subsequent lactation.

¹Hockett, M., M. Payne, and R. Rodriguez. 2014. Milk leucocyte differential diagnosis as a tool to guide quarter-level, selective dry cow therapy. In: National Mastitis Council Regional Meeting Proceedings. Ghent, Belgium.
²Hockett, M., and R. Rodriguez. 2013. Evaluation of milk leucocyte differential diagnosis for selective dry cow therapy. In: American Dairy Science Association Annual Meeting Proceedings. Indianapolis, IN.