

***Klebsiella* Mastitis**

- ***Klebsiella* mastitis can be visible or invisible**
- **Wood based bedding products can be a source of *Klebsiella***
- **Many healthy cows shed *Klebsiella* in their feces**
- **Any type of bedding, even sand, can become contaminated with *Klebsiella* from feces**
- **Manure in alleyways and holding pens is also a source of *Klebsiella***
- **Treatment of *Klebsiella* mastitis is not effective**
- **Prevention through pen and alley hygiene is key!**



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Quality Milk
Production Services

***Klebsiella* Mastitis Prevention and Control**



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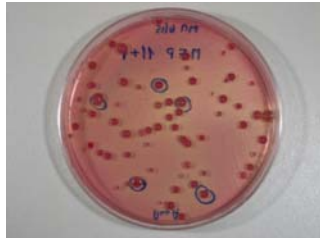


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Klebsiella Mastitis

Klebsiella mastitis is increasingly common in New York, the Northeast and other parts of the USA. *Klebsiella* is similar to *E. coli* in many respects, but there are differences too. Like *E. coli* mastitis, *Klebsiella* mastitis originates in the environment. Both types of mastitis can be fatal.



Cows that survive clinical *Klebsiella* mastitis often develop chronic mastitis. Milk may appear normal, but somatic cell counts are high, and repeated clinical cases may occur. Cows with chronic *Klebsiella* mastitis are often culled for high cell count, recurrent mastitis or production loss.



Vaccination does not provide much protection against *Klebsiella* mastitis and intramammary treatment with antibiotics is rarely effective. Prevention is the key to control.

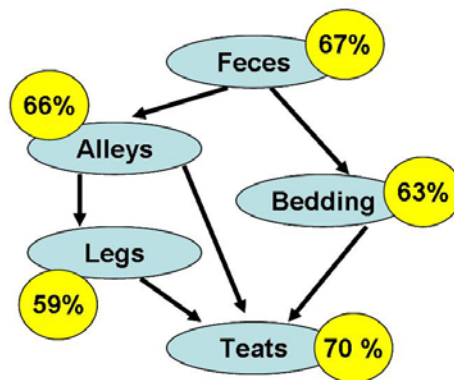
Sources of Klebsiella on the Dairy

Wood based products can be a source of *Klebsiella*, particularly wet and green sawdust and shavings. But *Klebsiella* is also found in herds that bed with recycled manure or sand.



QMPS research has shown that many healthy adult cows shed *Klebsiella* in their feces. Any bedding that is contaminated with manure can contain *Klebsiella*. Nutrients and moisture in bedding enhance *Klebsiella* growth.

Manure also gets into alleyways, onto cows' legs and onto their teat skin. The chart below shows how often *Klebsiella* is found in different places



Prevention and Control

Keep bedding clean. Store bedding in a clean and dry place, and keep beds as clean and dry as possible. The *Klebsiella* content of bedding can be tested if bedding quality is a concern.



Keep cows clean! Premilking teat disinfection reduces bacterial loads, but it does not remove all *Klebsiella* from teats that are dirty.

Keep alleyways and holding pens clean. Manure with *Klebsiella* may splash onto cows' udders, and it will contaminate feet and legs. When cows lie down, *Klebsiella* may be transferred from feet to teat.

Segregate cows with *Klebsiella* mastitis to avoid contamination of milking machine or environment with high bacteria loads.

