



New York State Cattle Health Assurance Program Mastitis Module *Considerations for Cow Bedding*

Bedding characteristics:

- ❖ Inert – ideal bedding will not support or promote the growth of potential mastitis pathogens. Generally inorganic bedding materials have much lower contamination levels than organic bedding materials. Inorganic materials such as builder's sand or crushed limestone are examples. Many commonly used organic bedding materials (straw, hay, sawdust, shredded paper, paper pulp) can have very high concentrations of environmental pathogens prior to use. Pathogens will multiply rapidly when the bedding becomes contaminated with moisture and manure.
- ❖ Comfortable – An ideal bedding should contribute to cow comfort by dissipating heat in the summer and providing some insulation in the winter.
- ❖ Dry – Excessive moisture, particularly in organic bedding will promote the growth of bacteria increasing the level of contamination of teat ends and the likelihood of increased new infection rate.
- ❖ Clean – Bedding materials should contribute to the cleanliness of animals. The bedding should not adhere to cattle or contain materials that may injure or become irritating to animals.
- ❖ Particle size – Organic bedding materials of small particle size encourage the rapid growth of bacteria, shortening the effective life of the material. Materials of small particle size often result in greater contact of contaminated bedding with teat ends increasing the risk of new infection.

Miscellaneous factors affecting bedding quality:

- ❖ Ventilation – Poorly ventilated barns may have specific areas or times of the year where the microclimate of the stall floor will develop excessive moisture increasing the density of environmental pathogens.
- ❖ Animal Density – Overcrowding will increase the contamination rate thereby shorten the effective life of bedding materials.
- ❖ Barn Design – Can contribute to increased contamination rate of bedding. Location of water sources and existence of cow traffic areas where manure is allowed to accumulate will increase the contamination level of bedding.

Bedding Management:

- ❖ New bedding should be stored for easy access and protected from contamination from rain, snow, barnyard runoff and other contaminants.
- ❖ When applied bedding should be laid down in quantities sufficient to allow teats to come in contact with fresh dry bedding when animals lie down until the next bedding period.
- ❖ Stalls should be groomed (wet and soiled bedding removed) during each milking.
- ❖ Bedding additives such as hydrated lime (1-2 pounds/stall) can decrease the existing bacterial load of bedding materials. The effect is short-lived (24 hours) and the limestone must be added to the bedding just prior to use.