

Beef Cow Waste Creates Challenges for the Future

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Something about building a hip-roofed barn assured our forefathers of a vivid appreciation for animal waste. In the early decades of settling the vast rural expanses of North America, family essentials were secured along with the need for availability of some form of fresh food year around.

In the northern environment, winter was a stumbling block, so up went the hip-roofed barns. The upper floor of the barn served as a haymow and the main floor provided winter protection for the family's animals. Essential to the success of the operation was a daily supply of milk and cream, along with suitable stable arrangements for the carriage horse.

The barn on our homestead held 12 stanchions for milk cows, a large pen in the rear of the barn for loose stalling of beef cows, three calf pens, stalls for three teams of horses and two grain bins. The haymow had strategically placed hay drops over appropriate mangers. On a cold winter's night, the barn was quite nice.

The daily chores were very labor intensive. All the hay and grain was delivered by hand. More importantly, the animal manure left in the gutter had to be cleaned daily.

The proper daily disposal of the all the animal manure was a necessity because delaying the barn-cleaning chores only meant more work. Any accumulation potentially would freeze and make cleaning very difficult until a warm spring day. That was not acceptable, so the daily routine of backing the manure spreader into the barn and shoveling was the routine.

And yes, cows crap. They do it quite a bit, actually. This was a vivid reminder as one braved frigid weather to travel out to the fields to spread the day's output.

The cow has not changed. The daily output of manure is no different now than when the homesteaders steadily integrated accepted old-country practices in dealing with animal husbandry.

As time went on and the neighbors left, the herds started to get larger, soon outgrowing the hip-roofed barn.

Natural hills and valleys were used for shelter from

the elements and the cows took advantage of the natural shelter. Further growth meant the barns were replaced with pole sheds, which are mechanically cleaned only periodically. Today many cows from beef operations never see any significant shelter other than what a good grove of trees or a coulee provides.

The problem that becomes increasingly obvious is that, as more cows are added to predefined locations, the concentration of cattle waste becomes a problem. This is a manageable problem, but it is a problem that impacts the future of beef production. This concentration of waste matter also increases questions from the general population.

Charles Abdalla and Jennifer Lawton, in "Environmental Issues in Animal Agriculture," published by the American Agricultural Economics Association's online Choices magazine (www.choicesmagazine.org, Volume 21, No. 3, 2006), note that livestock operations potentially impact water quality through manure, bedding, spilled feed and dead animals. These same livestock operations potentially impact air quality.

An increase in the confinement of animals increases odor. There also are dust concerns, along with potential development of bioaerosols that could lead to human and animal disease. In addition, Abdalla and Lawton write that the negative impacts of methane gas production by cattle and the anaerobic decomposition of manure are real.

As the beef industry moves into the future, a proactive response needs to arise, assuring producer and neighbor alike that waste is a manageable issue. Although no longer shoveled and forked into a manure spreader, the development of appropriate environmental checks will be critical.

May you find all your ear tags.

Your comments are always welcome at www.BeefTalk.com. For more information, contact the North Dakota Beef Cattle Improvement Association, 1041 State Avenue, Dickinson, ND 58601 or go to www.CHAPS2000.com on the Internet. In correspondence about this column, refer to BT0325.

Potential Beef Environmental Issues

- **Manure, bedding, spilled feed**
- **Dead animal disposal**
- **Odor and dust concerns**
- **Development of bioaerosols**
- **Production of methane gas**

Adapted from Charles Abdalla and Jennifer Lawton,
(www.choicesmagazine.org, Volume 21, No. 3, 2006)