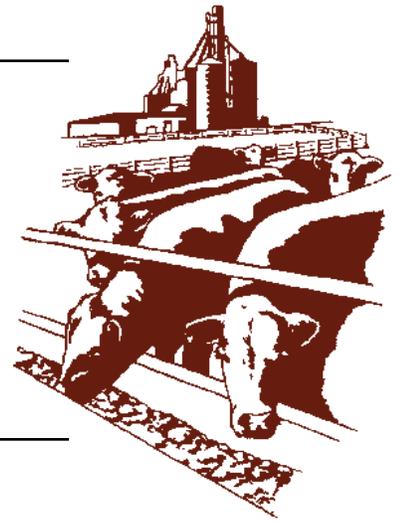


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# Beef Cattle Handbook



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**BCH-4200**

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## Keeping Cattle Clean

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When cattle are muddy, meat packers have to greatly slow down their lines in order to comply with USDA requirements for clean carcasses. The zero tolerance rules require trimming of all fecal matter and dirt from beef carcasses. When feedlot cattle come into a plant with mud caked on like cement the chain speed may be cut in half. Attempting to wash really muddy feedlot cattle is both futile and highly detrimental to animal welfare. It is simply impossible to wash the mud clods off. During cold winter weather washing would stress the cattle and would probably increase dark cutting. Washing is not a viable option for feedlot cattle with mud caked on their bellies. Packers which process dairy cows can clean their animals by rinsing off fresh manure with a low pressure hose. Dairy cattle are accustomed to being washed and the procedure would cause minimal stress. High pressure hoses should not be used to wash cattle. Feedlot cattle are wilder and less tame than dairy cattle. Washing procedures of any type are likely to be more stressful for feedlot cattle. Tame animals are less stressed by handling and restraint than wilder animals. There have been suggestions of building carwash devices for washing cattle. From an animal welfare standpoint this would be totally unacceptable. They also would not remove the caked on dried mud.

### Drier Feedlots

The emphasis needs to be on preventing mud from getting onto the cattle in the first place. Observations in Kansas and other states have shown that feedlots with a good drainage slope in the pens have half as much mud

compared to feedlots that are flat. Cattle will also stay cleaner in lots with mounds.

The Australian feedlot industry has developed pen management systems which keep cattle clean. Necessity is the mother of invention. The Australian industry has been under intense scrutiny from the public on both environmental and animal welfare concerns. In response to these pressures the feedlot industry developed pen management and drainage systems which really work. The cattle are kept dry and the feedlots have relatively little odor. These systems are currently working in areas with over 20 inches of rainfall each year. I toured one dry dust free yard that had cattle stocked at tighter densities than most US yards.

The secret to keeping cattle clean is maintaining a smooth, sloped, water repellent surface. This surface will shed water and rapidly drain. To maintain the pen surface a box scraper equipped with a laser leveling device is used every 8 weeks to smooth the ground. In the US pens are usually cleaned with a large loader once a year. It is impossible to maintain a smooth surface with annual cleaning.

### Three Percent Pen Slope

The laser is aimed to guide the scraper to produce a smooth pen surface which slopes at a three percent grade from the feedbunk towards the cattle alley. Small mounds are made in the pen each time the box scraper is dumped. To repel water, a compacted manure layer is left. Care is taken to avoid puncturing this manure layer. These procedures require a lot of management attention

to details. Manure buildup under fences has to be constantly removed to prevent water from ponding along the fences. If the cattle dig holes in the pen surface they are promptly filled in. sometimes cattle gouge holes in the ground behind the concrete bunk apron. If this occurs they are immediately filled in with gravel. The installation of 20 foot feedbunk aprons will also help alleviate this problem.

All new feedlots being constructed in Queensland, Australia are required to have proper site work for both pen drainage and pollution control. In new construction the feedlot pens are sloped three percent from the feedbunk towards the cattle alley. A three percent slope is ideal because steeper slopes cause water to run off too fast which causes erosion of the pen surface. Shallower slopes do not drain well. Slopes within a range of 2 - 4 percent will work. To avoid erosion of the pen surface the maximum pen depth from the feedbunk to the cattle drive alley should not exceed 210 feet.

The total slope of the entire feedlot should be 0.5-0.8 percent. All the pens drain to their respective drive alleys, and the drive alleys drain to a collecting area at one end of the feedlot. Feedyards should be laid out to avoid pen drainage from one pen into another pen.

### **Feeding in the Southwest**

A possible long term solution to the dirty cattle problem is moving cattle feeding back to dry southwestern states such as Arizona, New Mexico and southern California. Cattle fed in these areas seldom get dirty and gains are better. During the late seventies a large segment of the feeding industry moved to Kansas to get closer to grain supplies. The price paid for this move was increased muddy cattle. In Arizona, cattle seldom get muddy and the pens stay dry all winter. The special laser scraping methods used in Australia are not required in Arizona. Pens will stay clean and dry in Arizona with one annual cleaning with a loader.

### **Additional Reading.**

Proceedings of Designing Better Feedlots Workshop, Feedlot Services, Dept. of Primary Industries, P. O. Box 102, Toowoomba, Queensland 4350, Australia. (1993)

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