

Cleanliness of Free Choice Water for Calves

There are few who can argue with the research that supports the use of free choice water for calves. Dr. Kertz' original research in 1984¹ showed the correlation between the feeding of water and increased consumption of calf starter. Along with this correlation came increased average daily gains to calves with access to water. Ever since this research has been published, calf raisers have been encouraged to have free choice water available to calves.

Free choice water is important but how clean should that water be? It is not uncommon in bottle feeding situations for the water bucket to simply be refilled with water but never really emptied on a regular basis. Over time, the water bucket can accumulate feed, saliva, flies, dirt and other foreign material leading to poor quality water. What effect does poor water quality have on the growth and health performance of calves?

Researchers in Utah have taken a look at the effect of frequency of changing and rinsing the drinking water buckets of hutch raised Holstein calves. They looked at three different treatments using a total of 72 calves. Treatment 1 had their water buckets cleaned and rinsed daily. Treatment 2 had their water buckets cleaned and rinsed every 7 days. Treatment 3 had their water buckets cleaned and rinsed every 14 days. Any fecal contamination of the buckets was removed and cleaned immediately.

Frequency of Rinsing and Changing Water in Buckets			
Average Daily Gain (lbs/head/day)			
	Daily	7-days	14-days
	1.55 ^a	1.48 ^b	1.40 ^c
^{abc}	Different superscripts differ, P<.05		

Calves that had their water changed daily were found to grow faster than those changed either every 7 days or every 14 days. It was also found that calves that had their water changed every day or every 7 days were significantly less likely to have multiple medical treatments.

Frequency of Rinsing and Changing Water in Buckets			
Number of separate medical treatments	Number of calves per 24 requiring 1,2 or 3 treatments		
	Daily	7-days	14-days
1	18	18	8
2	6	6	14
3	0	0	2
MEAN	1.25 ^a	1.25 ^a	1.75 ^b
^{ab}	Different superscripts differ, P<.05		

It is important to offer free choice water to calves. Offering fresh and clean water is also important. Dirty, contaminated water can lead to poorer rates of gain and increased medical treatment costs.

References:

1. Kertz AF, Reutzel LF, Mahoney JH: *Ad libitum* water intake by neonatal calves and its relationship to calf starter intake, weight gain, fecal score, and season. *J Dairy Sci* 67:2964-2969, 1984.
2. Wiedmeier RD, Young AJ, Hammon DS: Frequent changing and rinsing of drinking water buckets improved performance of hutch-reared Holstein calves. *The Bovine Practitioner* 40:1-6, 2006.