

Many factors affect livestock herd health and performance, however, there is a definite correlation between water quality and weight gain. Research has shown a 9% weight gain increase for cows with calves resulting from drinking water from a trough, compared to those cows drinking directly from a pond. Within the same study, steers showed an increase of 16 - 19% increase in weight gain under the same conditions. This comparison between a surface water source such as a dugout pond to a watering facility, or trough, illustrates the importance of the quality of water for livestock.

Surface water sources, such as dugout ponds, that allow livestock access may have water quality problems including various forms of bacteria and parasites which will affect herd health resulting in an economic loss. In addition, these water quality problems will inhibit the consumption of water resulting in less forage and feed intake eventually effecting weight gain.

Economics

Other essential practices needed for the operation of a 614 – Watering Facility include 516 – Pipeline, 533 – Pumping Plant and 642 – Water Well. Benefits would be the same for galvanized metal, plastic or concrete watering facilities.

Table 1. Watering Facility Benefits for Beef Cattle

BEEF CATTLE					
Cow					
Average Weight	Weight Gain with Watering Facility*	Total Weight Gain	Average Price per CWT**	Average Price Received per Lb.	Total Benefit per Cow
800	9%	72	\$53.00	\$0.53	\$38.16
Steer					
Average Weight	Weight Gain with Watering Facility*	Total Weight Gain	Average Price per CWT**	Average Price Received per Lb.	Total Benefit per Steer
440	16%	70	\$92.00	\$0.92	\$64.77

*Weight gain increase based on a conversion from a dugout pond to a watering facility.

** 10 Year State Average

As illustrated above in Table 1., if converting from a dugout pond to a watering facility, the total benefit per cow is estimated at approximately \$38.16. The estimated benefit per steer under the same condition is approximately \$64.77. Costs should also be calculated to acquire net benefits. Average weight data should be estimated when gather economic information under benchmark conditions. Refer to Economic Jobsheet FL-614-EJS for site specific benefit and cost analysis.

Additional Benefits

Other environmental benefits may be gained through utilizing Watering Facility instead of a dugout pond including reduced erosion as a result of less trampling from livestock around the pond and increased water quality on-site as well as off-site, depending on the hydrology.

REFERENCES:

Prairie Farm Rehabilitation Administration, "Water Quality and Cattle, Importance of Water Quality to Cattle", Agriculture and Agri-Food Canada, March, 2006.

Florida Agricultural Statistical Service, Prices Received Report.

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