



**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

### **Hardin County Extension News Release**

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## **Beef Cow Size and Profitability**

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I recently read a couple of on-line articles from Drovers Cattle Network that piqued my interest because they dealt with the topic of cow size and the impact on beef cattle enterprise profitability. One article entitled “Time to Change Directions” written by Alan Newport reported on data gathered from several states with comments from agricultural economists and animal scientists. The other article was entitled “If You Go Big Be Prepared” and was written by Matt Hersom, a beef cattle specialist from the University of Florida. The basic gist of the articles was that cow size measured by mature weight has been increasing since the ‘80s and we have reached a point where that size is negatively impacting upon the profitability of the beef cattle enterprise, specifically the cow/calf operation. The data being used to support this statement came from the Southwest Standardized Performance Analysis (SPA) database for herds in Texas, Oklahoma and New Mexico. In addition there was data from Arkansas and Montana and the Hersom article used data from Florida. The point here is that these environments/climates are different than Ohio so that needs to be taken into consideration.

It used to be common to use a 1000 pound cow as an example when talking about beef cattle nutrition. It’s now hard to find a beef cow herd with an average cow weight of 1000 pounds. According to Hersom, the beef cattle specialist from Florida, “the increase in cow bodyweight over the years is likely an effect of cow-calf producers placing greater emphasis on the genetics of calf weaning weight, yearling weight, and the necessary increase in cow milk production required to support desired calf growth performance.” Over time, selection for larger calves leads to larger cows. The issue is that bodyweight determines the intake of forages and feedstuffs. If you look at NRC beef cattle nutrient requirement tables you will see that crude

protein, energy, vitamin and mineral requirements are directly related to dry matter intake (DMI) as a percent of bodyweight. In his article, Hersom says that feed requirements account for 50 to 75 % of the annual maintenance costs for a beef cow herd.

One of the concerns with trends towards larger cows is that there is not an economic return for that increase in size and that more feed or supplementation may be needed to maintain those cows. David Lalman, an Oklahoma State University animal scientist, looked at data from Montana, Arkansas and Oklahoma. He was quoted in the Newport article as saying that based on that data, each 100 pounds of additional cow weight only added about 6 pounds of additional calf weaning weight. The additional pounds of calf weaned did not pay for the added costs of carrying a larger cow. Oklahoma data showed that it was taking roughly 4 times more acres to run a cow in 2014 vs. 1974. Wyoming records have shown that cows weighing 1300 to 1400 pounds need 9.5 pounds of forage for every pound of calf weaned. Cows weighing 1000 to 1100 pounds need 7.6 pounds of forage for every pound of calf weaned. Lalman concludes that beef operations need to manage and select for cattle that perform in their environment; selection for reproductive performance will lead to profitability.