

# Size Matters



**University of Georgia study looks at efficiency of production by cow weight, age.**

*Story & photo by*  
**BECKY MILLS**

That big ol' cow looks mighty pretty grazing in your pasture. But when it comes time to pay the bills, her mid-size herdmate probably contributes more, at least according to a study done at the Northwest Georgia Research and Education Center.

Ted Dyer, University of Georgia Extension animal scientist, conducted the study to take a hard look at the relationship between cow size and efficiency. Now in its second year, the research project also looks at the effects of cow age on efficiency.

After one year's worth of data has been collected and analyzed, Dyer says, "Cows are not as efficient at higher weights as they are at lighter weights and younger ages."

To get the numbers, Dyer used

438 crossbred cows at the Calhoun, Ga.-based experiment station. He weighed each cow three times: when she was pregnant, when she was nursing a calf and when her calf was weaned. Then he took the calf's weaning weight (adjusted to 205 days, the birth weight of the calf and the age of the dam) and calculated the percent of the cow's body weight weaned.

"The heavier the cow's mature weight the less efficient she is in raising a calf," Dyer says. "Cows that weighed less than 1,300 pounds (lb.) showed a 45-plus cow weight weaned percentage."

He adds, "Younger cows were also the most efficient in percent of cow weight weaned. Cows that were under 4 years of age showed a 44-plus cow weight weaned percentage."

For Dyer, the conclusion is obvious. "You need to own or have

access to a set of scales." In many parts of the country, local cattlemen's associations have portable scales for use by their members.

He also recommends weighing the cows more than one time during the year and for more than one year.

"I don't know if you need to do it every year, but it isn't a bad option," he says. "We saw a 100-pound increase in cow body weight between the fall of '08 and the fall of '09. If you weigh them every year you can observe environmental differences. In our case we had three years of bad drought followed by rain."

He also suggests waiting to weigh the cows when you're getting them

**Left:** "Cows are not as efficient at higher weights as they are at lighter weights and younger ages," says University of Georgia Extension Animal Scientist Ted Dyer.

up anyway for herd health chores like pregnancy checking and weaning.

## What's the max?

So, how big is too big? And how old is too old? Dyer says it varies from operation to operation. For the overall goal of cow weight weaned, he recommends 50%. He admits, however, it isn't an easy goal to reach.

"We have an exceptional herd here," he says, "and we had an average of 44.36%. We have some big cows, but we're working on it. We really need to look at efficiency more than weight."

If you start weighing your cows and find out they aren't as efficient as you'd like, evaluate your yearling weight goals, Dyer says. "A lot of selection is based on yearling weights. We still need to look at growth — but in moderation. There is a happy medium to be reached, and it is different in every operation. We need to look at frame scores when we select both herd sires and replacement heifers to get them as efficient as we can."

He also recommends looking at the age of your cows.

"The 2- to 4-year-old cows are really efficient, but they are fairly efficient up to 6," he says. However, "there are some 10- to 14-year-old cows that are still efficient, although there aren't many of them. Those are the ones you want to keep because of their longevity and efficiency."

The animal scientist says they are using the data from the study to make culling decisions in the Calhoun herd and will probably extend the study from two years to three.

"With input costs as high as they are, cattle producers have to look at efficiency," Dyer says. "Then you can run more cattle on fewer acres and wean more pounds of beef."



**Table 1: Summary of production of 438 mature cows with avg. wt. of 1,352 lb., by weight**

Wt.	No. cows	% of cow wt.
1,700	4	34.0
1,600	23	37.0
1,500	68	39.0
1,400	94	42.0
1,300	94	45.0
1,200	56	46.5
1,100	53	49.0
1,000	42	51.5
900	4	53.0

Source: Northwest Georgia Research and Education Center.

**Table 2: Summary of production of 438 mature cows with avg. wt. of 1,352 lb., by cow age**

Cow age	% of cow wt.	No. cows
14	41.5	1
13	41.0	1
12	43.0	5
11	42.0	15
10	42.0	11
9	41.5	7
8	40.5	28
7	41.0	44
6	42.5	47
5	42.5	86
4	44.0	64
3	46.0	35
2	48.5	91

Source: Northwest Georgia Research and Education Center.

Actual weaning wt. avg. = 599 lb.; adj. weaning wt. avg. = 592 lb.

% of cow wt. weaned = 44.36%