COW/CALF CORNER

The Newsletter

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At What Point Do We Run Out of Cattle?

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The U.S. beef cow herd has decreased 12 of the last 14 years, dropping from a cyclical peak of 35.3 million head in 1996 to the January, 2010 level of 31.3 million head. This represents the smallest beef cow herd since 1963. Combined with smaller dairy cow numbers, the 2010 calf crop is expected to be 35.4 million head, the smallest U.S. calf crop since 1950. Total U.S. cattle inventory has decreased by almost 10 million head since 1996 to the January, 2010 level of 93.7 million head, the smallest cattle inventory since 1959.

In contrast, total beef production has not changed accordingly. In fact, 2010 beef production is projected at 25.9 billion pounds, slightly higher than the 1996 level of 25.4 billion pounds. This leads to two questions: how have we maintained beef production with declining inventories? and can we continue to maintain production? We have maintained production thus far in two primary ways. First, decreasing inventories allows the industry to utilize that inventory as production while numbers are declining. Secondly, for the decade, between 1996 and 2006, cheap corn allowed the industry to feed animals to ever increasing carcass weights and to feed lightweight calves for many days in feedlots. Feedlot inventories are thus maintained by a slower rate of turnover. Thus, the industry was able to effectively turn fewer cattle into more pounds of beef.

The situation is now different. Expensive corn forces the industry to feed heavy yearlings and move them through the feedlot faster. Carcass weights in 2010 have been below year ago levels almost all year and high feed costs likely limits carcass weights to little or no trend in coming years. A faster feedlot turnover rate exposes the shortage of cattle quickly as feedlots scramble to find sufficient supplies of

feeder cattle to place on feed and maintain feedlot inventories. So far, we appear to have been able to do that. Total cattle slaughter for 2010 is running almost two percent above 2009 levels. However, an analysis of the slaughter mix is instructive. Steer slaughter is up less than one percent this year. By contrast, heifer slaughter is up nearly 3 percent and cow slaughter is up 4 percent. It is clear that we are maintaining slaughter rates, in the short run, with our females. This is not sustainable without accelerating herd liquidation going forward. At some point we will try to stabilize the herd size and then expand a bit. Given the current situation this implies a significant reduction in cattle slaughter in the short run even to hold the cow herd size steady. It seems likely this process will start in 2011.

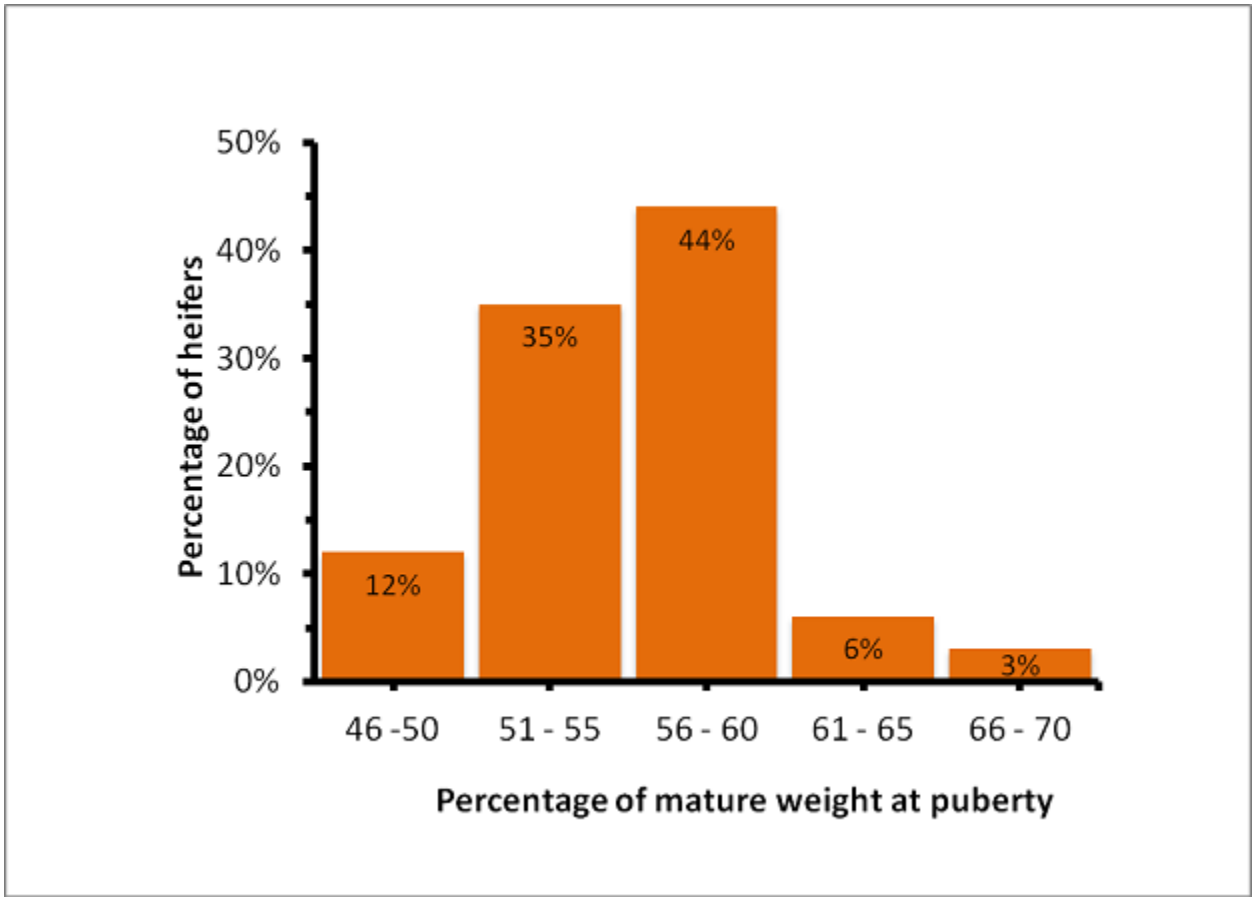
Target Weights for Replacement Heifers at Breeding

Glenn Selk, Oklahoma State University Animal Science Professor Emeritus

The period between weaning and breeding is a very critical time in the life of a beef female. At weaning she is between 7 and 10 months old and weighs, in general, 350 to 650 pounds. Some six months later, she is exposed to the bull or to artificial insemination. Hopefully, most of these heifers are bred in the first 21 days and 80 percent or more are pregnant after a 45 day breeding season.

How much should heifers weigh at the start of the breeding season? Growing programs for weaned replacement heifers must be adequate to allow enough gain from weaning to 13 months of age to allow a high percentage of heifers to being cycling. Research at Oklahoma State University has looked more closely at the weight of the heifer at puberty in relationship to her eventual mature weight. For years, the accepted target weight for yearling replacement beef heifers at breeding was 65% of their mature weight. Recently that target has been questioned. Oklahoma State University reproductive physiologists have studied the weight that beef heifers reach puberty in relationship to their eventual mature weight. A total of 34 crossbred heifers (in 3 different years) were studied at puberty and again when they had reached maturity at 5 to 7 years of age. The heifers were at least ¾ Angus and ¼ or less Hereford. Shrunk weights were obtained when concentrations of progesterone in the plasma indicated that cycling activity had begun. Please remember that "average" is the point at which approximately half of the heifers reached puberty. The "average" weights at puberty were statistically similar (695 lb, 695 lb, and 737 lb) for the three years. Mature weights were obtained in mid-gestation, adjusted to a body condition score of 5. Mature "average" body weights were also similar (1269 lb, 1256 lb, and 1280 lb) for cows born in all three years. The mean (or "average") weight at which heifers reached puberty was 56% of the mature weight.

Figure 1 below shows the percentage of heifers reaching puberty at the incremental increases in percentage of mature weight.



Only 12% of the heifers reached puberty at 50% of mature weight or less. Only forty-seven (47%) percent of the heifers reached puberty at 55% of mature weight or less. Ninety-one (91%) percent of the heifers reached puberty at 60% of mature weight and 97% had reached puberty by the time they weighed 65% of the mature weight.

Producers wanting to be certain that a high percentage (90% or more) of their replacement heifers have reached puberty before the start of the breeding season, need to have heifers weigh at least 60% of the mature weight. As cow calf producers plan and begin their winter growing program for replacement heifers that will be bred next spring, they should think about the target weight that they are trying to reach. Also, keep in mind that if a lower percentage of mature weight is chosen as the target, then more heifers need to placed in the growing program, in order to assure that enough heifers reach puberty and are bred next spring to meet the needs of the herd. Source: Davis and Wettemann. 2009 Oklahoma State University Animal Science Research Report.<http://www.ansi.okstate.edu/research/research-reports-1/2009/008%20Wettemann%20Res%20Report%20Davis%202009.pdf>