Herd Bull Investment – Annual Bull and Per Cow Cost Calculation

In most cases, the decision to purchase a herd bull relates to an investment that is expected to pay out over a productive life ranging from 3 to 5 years. While the purchase price for a bull may seem expensive, the investment in a higher priced bull can contribute to improved production of market-preferred calves and better weaning weights. Thus the investment may be justified, particularly when viewed in relation to the number of calves the bull can sire over his useful life. In many cases, the salvage value (the net sales value when the bull is culled) helps offset a substantial portion of bull purchase cost, which reduces the total depreciation cost of a bull. With ownership costs (depreciation, death loss and interest cost) prorated over the number of females serviced and calves produced during the bull's productive life, a decision-maker can approach the potential investment on a sound basis.

This decision aid helps producers put the cost of maintaining a bull into proper perspective with respect to both cost and production. Annual bull cost is calculated and prorated on a: 1) per cow basis, 2) per calf weaned basis and 3) a per cwt. of calf weaned per cow exposed basis. This decision support aid provides information on the change in bull cost per cow with a change in number of cows serviced, along with the change in weaning weight required to pay for a higher priced bull. This provides insight into what the market would have to pay to justify paying more for a herd bull that could produce a more marketable calf.

Input Data

The usefulness of this tool is its capability to quickly evaluate the impact on the cost of a bull by changing different variables of interest, which are the values in the blue cells. Key data include the bull's purchase cost, estimated salvage value, and expected economic life. In addition, the user should enter an interest rate to be used in calculating the cost of capital used in the bull investment. These values are used to calculate the "ownership costs" of the bull investment, which become fixed costs when the bull is purchased.

Annual bull costs are expenses such as grazing, feed, and veterinarian costs which include the annual breeding soundness exam. In this decision aid, the bull cost per cow is calculated by dividing the ownership and annual bull cost by the number of cows exposed per year to the bull. The bull cost per calf weaned and per cwt of calf weaned calculations are based on data entered regarding the % weaned calf crop and weaning weight.

To evaluate the impact of changes in the number of cows serviced by the bull annually, a sensitivity table is included. The bull cost per cow is quite sensitive to the number of cows serviced, which reinforces the importance of matching herd size to bull capacity.

It is important to make sure that the bull is sound, well-managed and in good condition to ensure cows wean a marketable calf. Uncertainty related to the bull's performance or the possible impact on the quality of replacement heifers is not addressed in this decision aid. Since a higher priced bull does not insure better genetic performance, bull selection involves more than just price.

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*Prepared by James M. McGrann, Professor Emeritus, Department of Agricultural Economics, Texas Cooperative Extension, Texas A&M University 7-25-06. Revised by Damona Doye, Extension Economist and Regents Professor, Sarkeys Distinguished Professor, and Roger Sahs, Extension Assistant, Oklahoma State University and Larry Falconer, Mississippi State University. December 2015.