

INTRODUCTION TO THE NCSU DAIRY HEIFER ENTERPRISE BUDGETS

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There are nine NCSU **Dairy Heifer enterprise budgets** for large dairy breeds available in print format. Individuals who wish to create their own estimates of rearing costs can use the "**Dairy Heifer Cost Calculator**", which is an Excel-based spreadsheet program.

The nine print budgets were developed to represent feeding programs based on three different forage types and three rates of heifer growth. The three rates of growth are included because expected lifetime profitability of a heifer depends only partly on heifer raising costs. Profitability also depends on the time of year she first calves and on the effectiveness of the re-breeding program. For example, in many parts of the country, summer heat reduces total lactation milk production from animals that calve in the summer. Heat also affects re-breeding rates. Milk prices are volatile but, on the average, there is a seasonal pattern to milk prices and this affects the profit potential of a heifer or cow that calves at a particular time of year. Because lifetime milk production and profitability are affected by the time of year a heifer first calves, it may be profitable to modify the heifer rearing program to avoid heat related problems. For this reason, it is recommended that heifer raisers develop a comprehensive rearing strategy based on the time of year a heifer calf is born and the desired time of year this heifer will enter the milking herd. This strategy will determine the desired growth rates for a specific group of heifers.

Individual enterprise budgets include costs and revenue from birth to the "close-up" bred heifer stage of development. They also include costs and revenue for four growth stages. The "Birth to Weaning", "Weaning to Six-month" and "Breeding to Close-up" stages are based on recommended growth rates for heifers at these stages of their development. Heifer raisers have flexibility in the "6-month to Breeding" growth stage, depending on the date of birth of the calf and the desired time of year for that heifer to enter the herd. The 22-month, 24-month and 27-month budgets are based on different rates of growth during this growth stage.

Enterprise budgets are intended to provide guidelines only. They should be used to guide the development of one or more budgets for a specific farm situation. They are not intended to be used "as is" without being modified. It is not possible to update budgets every year with current resources and prices vary from year to year and place to place.

Also, these budgets were developed to reflect fairly typical farm situations, assuming somewhat above average management and normal growing conditions. However, on a specific farm, soil quality may be below average or weather may be abnormal, which affects pasture and crop yields, different technology and inputs may be used, etc.

Note that machinery costs are based on new equipment prices for the year in which the budget was developed. Used equipment has lower ownership costs (depreciation, interest on investment, tax, insurance) but has higher annual repair and maintenance costs and may be less efficient. Investments in equipment and facilities affect labor efficiency. Labor costs depend on the farm situation. Some activities may require extra hired labor with the associated additional expense. On another farm these same activities might use existing hired farm labor that is seasonally under-employed, resulting in no additional out-of-pocket expense. On yet another farm the activity might be performed by the owner. In this case, the owner could include a labor charge comparable to the cost of hired labor or one that reflects the minimum return the owner wants for his or her time (the opportunity cost).

Also included along with the heifer budgets is “**Heifer Feed Costs**”, an Excel spreadsheet that includes the rations used in the enterprise budgets (and others). Note that the pasture and hay costs included in the spreadsheet are production costs based on the NCSU forage budgets and include operating costs, fixed costs and labor charges. The costs of feeding out hay and managing pasture are NOT included here but are reflected in the heifer budgets. Similarly, concentrate costs are ingredient costs only and the costs of formulating and feeding the ration are included in the heifer budgets.

The user can enter data in the yellow highlighted cells in the spreadsheet. Information in the other cells is calculated from this information. By entering their own feed prices or ration information, users can explore the effects of alternative diets on feed costs. If reformulating the heifer diets, the user should work with a qualified nutritionist to ensure that rations meet all of the dietary requirements for the desired level of animal performance. Also, feed costs at one stage of development should be evaluated from the perspective of the entire heifer raising period because other changes may be required to achieve the overall desired rate of growth and body condition. In addition, users should bear in mind that the economics of heifer raising includes more than the feed costs reflected in this spreadsheet. The user must accept responsibility for any information generated with this spreadsheet and any decisions made.