ABSTRACTS
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A dairy's economic vitality is dependent on the efficient management of variable and fixed costs associated with milk production. Management practices have evolved in response to the underlying biological life cycle of a cow to confer economic advantages to producers. Under current management practices, heifer rearing cost is commonly reduced by lowering age at first calving, thereby reducing the fixed costs of animal replacement over the remaining lifespan of the animal. By attempts to lower the calving interval (CI), the curvilinear attributes of the lactation curve are utilized to ensure a high level of average milk/day - thereby minimizing the cow's daily fixed maintenance cost over more pounds of product. A countering economic force encouraging longer calving intervals (C.I.) are the fixed costs associated with each lactation event (peri-parturient mortality and morbidity, breeding cost etc.). As these cost increase, it is desirable to spread them over more units of product by lengthening the C.I. New technologies, (induced lactation, elimination of the dry period, changing the shape of lactation curve) continually challenge traditional dairy production practices and present new atypical production possibilities. Technologies that induce lactation have the potential to dramatically reduce heifer-rearing cost and/or the fixed cost/lactation and, depending on the integrity of consequential production, change the herd's economic efficiency. Technologies that alter the shape of the lactation curve will minimize the disparity between early milk production and late production, thereby potentially changing the advantages of a short C.I. The economic valuation of these atypical milk production practices will be dependent on the changes in return on investment, changes in risk (variability of return) and changes in flexibility of the production process.

Key Words: Milk Production, Economics