

Development of a Systems Analysis Model for Lean Beef Production

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Food service trends in recent years have developed in such a fashion that hamburger beef consumption in the U.S. has grown at an extremely rapid rate. It is estimated that during the years 1974-76, this type of beef accounted for 35 to 45 percent of total beef consumption and may rise to 55 to 65 percent by the year 1985. The current major thrust in the cattle feeding industry is aimed at the "choice" beef market which produces beef of a higher fat percentage than the 75 percent lean/25 percent fat beef used for hamburger preparation in the vast and rapidly growing "fast-food service" industry. Thus the identification and evaluation of alternative systems of beef production seem appropriate and essential in the best interests of Oklahoma beef production.

Research in an area such as this can be approached by the use of experiments involving animals and treatments thought to be productive to maximize resources in the production of lean beef. In this case, the variables which may have an impact on efficient lean beef production are so numerous that it would be most difficult, if not nearly impossible, to conduct research involving even a majority of animal and treatment effects. Fortunately, there are many reports in the scientific literature which deal with many of the variables thought to be important here, and for these reasons the efforts in this study are based on the results of previous research. Development of mathematical relationships among factors that influence beef production promises to be of value in two ways: (A) to provide meaningful information relative to the manner in which animal and feed resources may be used to the best advantage in producing lean beef under certain conditions, and (B) to identify the "gaps" in available information on the subject.

The development of the mathematical relationships to describe lean beef production has been initiated. When finished, we will be able to predict the percent lean beef from background information on the animal's breed, weight, age and sex.
