

## MODELING OF GOAT PRODUCTION SYSTEMS USING LINEAR PROGRAMMING

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### Abstract / Resumo:

The modeling of systems permits identify opportunities of research, the comprehension and quantify process that occur in animal production systems. This research was carried out to develop a linear programming model to simulate a goat production system in “Sertão Central” in Ceará state of Brazil. The model evaluates the profits of three systems: milk, beef and mixed (milk and beef). The result of the model was compared with the small farmers of Piranji district, in Ibaretama city-CE. The results of simulations realized indicates that the best choice to the farmers is use 34 females of mixed proposition (milk and beef), and the money (capital) (R\$ 300,00) to buy concentrates to animals limits the system. This result is similar as the observed in the real systems, where the farmers used a mixed proposition (milk and beef) animals, utilize the “Caatinga” and/or silage to feed the animals are the based of animal nutrition. The profit of this system is bigger than R\$ 700,00, if it has a good administration and organization. The model is indicating to simulate and optimize goat production systems.