ABSTRACT

The Feasibility of Commercial Captive Breeding of Red Brocket Deer, *Mazama americana trinitatis* (Allen 1915), in Trinidad

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The feasibility of Red Brocket deer farming was studied to assess its potential in Trinidad. Captive breeding at six sites was studied for a period of 24 months. Data on housing, reproductive biology, feeding, health, behaviour and economics were collected through monthly visits to each site.

Hobbyist farmers operated the majority of sites, unconcerned with profit. Consequently, accurate records were scarce but the record sheets provided alleviated this problem. Enclosures with adjacent huts facilitated the necessary separation of deer and eased the handling of deer. The average age of sexual maturity in bucks and does was calculated as 18.9 months and 13.4 months, respectively. Similarly, the average oestrous cycle lasted approximately 24 days, and average gestation period was approximately 217 days. No defined breeding season was observed in the captive deer. Food materials ranged from fresh fruits and vegetables to many commercial feeds, of similar protein and fat content. Feeding cost was cheapest when highly subsidized by the free produce obtained.

In general, deer in captivity remained wild and this augured well for conservation efforts to release deer into the wild. A well designed enclosure and good sanitation practices along with close monitoring reduced health risks. The first year of deer farming involved mean start-up costs of $4050 and a loss of $3609; considerable money was spent with no immediate return. The mean valuation of a deer at $1000 represented considerable assets at the start of the following year which offset the losses. The successful farms had generated a mean annual net income of $354, from live deer sales by the fifth year, hence a positive balance.

The proposed deer farm models were only feasible with a 550 deer unit or larger. The high labour cost was the major limiting factor. Even with modified labour costs, a 55 deer unit was required to break-even. Such a large-scale farm would required a great investment, therefore, Red Brocket deer farming may have to remain as a hobbyist venture.

Keywords: Red Brocket deer; *Mazama americana*; deer farming; captive breeding; feasibility study.