Requirements for Managing Farmed Deer

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Abstract

The successful management of farmed deer has several basic requirements. Among them are a knowledge of the industry; an understanding of the availability of the animals and a grasp of the biology of the species involved; an ability to handle the animals and a thorough understanding of the nutritional needs of the stock; and an awareness of the types of disease to which the animals are susceptible. The industry may involve anything from the operation of hunting preserves to the production of venison and velvet antlers as well as several ancillary products. An operation may be involved in one or more of these activities, and the manager must be aware of the developments within a given sector in order to ensure maximum profitability. The biology of the species must be grasped in order to allow proper management of reproductive programs, as well as variations in nutritional needs and behavioral aspects. Handling systems may vary from locale to locale and from species to species. The evolution of such systems has allowed a great deal of detailed husbandry to be practiced. A good handling system is an absolute must. Once a handling system has been developed, the single most important factor in any commercial deer operation is almost certainly the nutrition of the stock. The requirements may vary from season to season and among different cohorts.

Key words: Biology, confinement, deer, domestication, handling, management systems, nutrition, reproduction

Introduction

Any management system for farmed deer has several basic components. The first is that production animals should have appropriate characteristics to allow them to be domesticated, at least to some degree. Other basic components of a deer farm include confinement and handling, nutrition, reproduction, and prevention of disease. For the system to be successful, these components must be integrated and at the same time managed with an underlying grasp of the biology, including the behavior, of the animal in question.

I will concentrate my discussion on the farming of deer rather than on their ranching, herding, or hunting. Hudson (1989a) has developed a model that elegantly describes the degree of confinement and management intensity required in each of these activities, but it is important to note that his model has no rigid divisions and considers the entire concept in terms of a continuum. While subsistence hunting certainly lies in a totally different category than an intensive grazing system, hunting cannot be entirely dismissed as a farming practice when one considers the hunting ranches that have been established in many countries. These are sometimes run in conjunction with operations that involve many intensive farming practices. Furthermore intensive farming operations that are physically remote from hunting ranches may target the production
of animals specifically for the latter, although the potential for growing public resentment of such a practice may curtail it.

Farming itself involves a variety of husbandry techniques that cannot be rigidly separated. For instance, large-scale farms of several thousand hectares may, within their own confines, have areas in which a specific group of stock may be managed in an intensive fashion. A range of techniques, again lacking rigid boundaries, would involve decreasing area from an extensive operation through semiconfinement, to an intensive system and finally to a feedlot. There seem to be two basic and opposite strategies for farming deer. On the one hand, an approach that involves as little direct management as possible is perceived as being desirable; on the other hand, a more intensive system with frequent handling is espoused. The decision on which method to adopt will largely depend upon available resources and capital costs, but the species chosen for the farm will also govern the method by which the animals are managed. In the United States of America (USA) and Argentina there are many deer farms on which minimal handling is practiced. In New Zealand intensive grazing systems are common, while in China virtually all deer are managed in feedlot situations.

The development of a business plan is the first step to establishing a deer farm. Without this step, the entire enterprise is fraught with risk. The establishment of objectives is a primary concern. These may be governed by legislation in some cases. For instance in the USA, some states specifically ban deer farming. In the United Kingdom (UK) and some states in the USA, velvet antler production is proscribed (Fletcher 1987). In Canada the rules governing species that may be farmed vary from province to province.

Objectives in deer farming include the production of meat (mainly venison), the production of medicinal compounds (mainly from velvet antler), the production of breeding stock, the production of trophy deer for hunting, the development of a tourist facility, the preservation of genetic diversity, and finally the production of musk. By-products exist in many systems. Within each of the objectives there may be differences of detail, both in management and market. For instance, requirements for the velvet antler trade differ from place to place (Pinsan 1982; Renecker 1987; Sim 1987; Fennessy 1989a; Wallis 1989). Currently, the market for antler as a medicinal product lies predominantly in the Orient and in Russia, but at one time the medicinal properties of deer parts, including antlers, were a subject of interest in Europe (Turbevile 1576a). Even before Turbevile, Pliny, writing in the first century A.D. ascribed medicinal properties to deer parts (Bostock and Riley 1855).

In many instances, production objectives can overlap, but they can also be diametrically opposed. The choice of which of them will be targeted is governed by a variety of factors. The most important will always be the marketplace. For instance, in China, velvet antler is the most important component, and even the by-products of slaughter of surplus animals are more valuable than the meat. Indeed the meat may be processed into components of traditional medicines (Pinsan 1982). Musk deer (*Moschus* spp.) are predominantly farmed in China, where the value of the musk lies both in its role in traditional medicine and in the production of material for scent (Macartney 1983; Qin and Liang 1983; Zhang 1983; Green 1989). On the other hand, in Mauritius, the production of venison is the prime objective (Lalouette 1985, Drew et al. 1989). In Canada, no wapiti (*Cervus elaphus*)-based venison industry has been developed. This is in part due to the small numbers of animals on farms, but this segment of the industry could be further governed by both high velvet prices and the fact that mature males in hard antler can be sold to hunting ranches. However, there is a growing North American market for venison from other species.

Deer venison should not be confused with meat products of other species that have also been called venison. Most marketable venison has been produced from juvenile (16- or 27-month-old) males. The rigid criteria of some associations that govern the naming and selling of the product as venison are designed to ensure that the consumer is offered a consistently high quality product. The objective for the farmer must be to get the product to market weight as quickly as possible, at the most economical price. There is even debate on whether the industry should be “market led” or “product driven.” Disciples of the former tend to see a need for manipulation of the animals in order to provide a