

DEER FARMING IN NEW ZEALAND

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Abstract: New Zealand has developed a fully functional and well structured farmed deer industry during the period from 1973 to 1990. A ready supply of feral animals and a history of pastoral farming were key reasons for the new farming venture. The major products are farmed raised venison which has been shown to be high in protein and minerals while being low in fat, energy and cholesterol, and velvet antler which is a highly valued medicine to eastern countries.

Key Words: deer farming, industry growth, New Zealand

Résumé : La Nouvelle Zélande développa une industrie de l'élevage des cerfs bien ordonnée et performante entre 1973 et 1990. Un approvisionnement ample d'animaux sauvages et une tradition historique de l'élevage furent les raisons principales de ce nouveau développement agricole. Les produits principaux sont la venaison qui se montre riche en protéine et en minéraux et basse en gras, énergie, et cholestérol, et les bois veloutés appréciés comme médicament dans les pays de l'Orient.

Mots-Clés: croissance de l'industrie, élevage des cerfs, Nouvelle Zélande

From one end of the country to the other, New Zealand is a pastoral farming landscape. Profitability of traditional sheep and cattle diminished in the early 1970's and with the brilliant

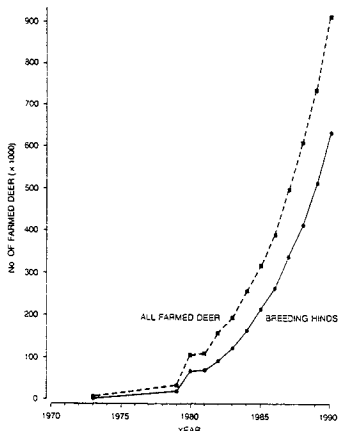


Fig. 1. Growth in the numbers of farmed deer in New Zealand from 1970 to 1990.

innovation in wild animal capture from helicopters pioneered by Tim Wallis of the Alpine Group a new farmed deer industry emerged. There were two main reasons why the farming of deer developed at a faster rate in New Zealand than anywhere else in the world: a) The country had a very large feral herd of deer, no natural predators and an animal population virtually out of control. Public perception saw the deer as a "noxious animal". The seed stock for a farming industry was abundant. b) New Zealand's livestock industry established over 150 years in a country with a favourable temperate climate was entirely based on pastoral farming with the animals grazing their feed from pasture. Supplemental feeding was confined to over-winter maintenance of breeding herds on hay and silage. Deer will not readily adapt to a feedlot environment but can readily be managed in modified pastoral farming systems.

Growth of the Breeding Herd

The first farm was licensed in 1970 and within 20 years the farmed deer population has grown to a million animals. Fig. 1 shows the remarkable rate of growth in breeding stock which is still doubling every 4 years. Helicopter capture in the late 1970's sometimes went as high as 25,000/yr and demand pushed the price up as high as US \$ 2,100/hind (Fig. 2). From 1985, with the price of breeding animals falling rapidly the deer capture industry declined in profitability and most of the growth in animal numbers in the last five years has been by natural increase.

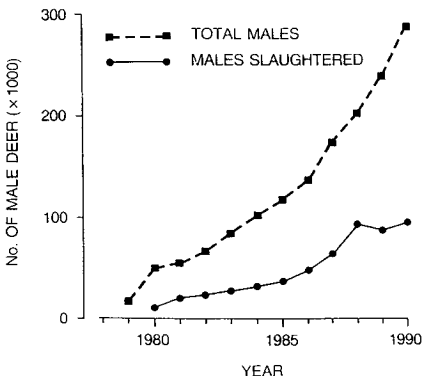


Fig. 3. Growth in the number of farmed male deer and those destined for slaughter.

Growth In the stag and buck herd

Major growth occurred from 1978 and much of that was due to live capture. Herds of red deer were held for velvet antler production and for venison production from 1983 once registered deer slaughter premises were established. Fig.3 indicates the growth since 1980 and shows that there has been minimal increase in slaughtered deer since 1988. The reason is the very high prices being paid for velvet antler. Eventually the estimated 10,000-20,000 extra stags being held on farms will be sent into the slaughter plants causing an extra jump in venison production.

Velvet Antler Production

The earliest deer farmers were venison producers but as velvet antler prices went up through US \$70/kg in the late 1970's it was realised that the product could be produced to quality specifications for a good profit. Fig. 4 charts the value of velvet antler to the producer. South Korea proved to be the main market for quality velvet antler which is used in the orient as a medicine. The high price tumbled in 1979 with a scandal in South Korea in which some undried velvet was "topped up" with blood from pigs or chickens to add weight and therefore value. Many people, particularly in Britain, did not seem to appreciate that the growing New Zealand deer industry did not depend on velvet antler sales. The farmed deer population would have grown at maximum rate with or without velvet antler. Trading prices for deer were, however, apparently linked with velvet

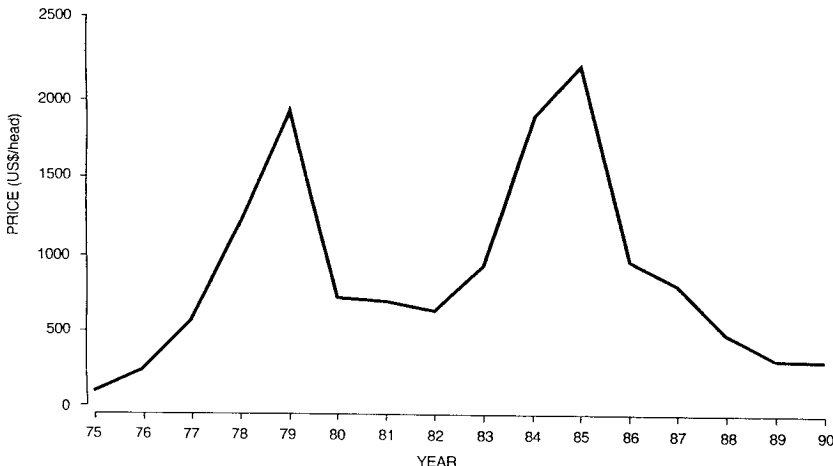


Fig. 2. Indicative values for two-year old red deer hinds from 1975 to 1990 in New Zealand.

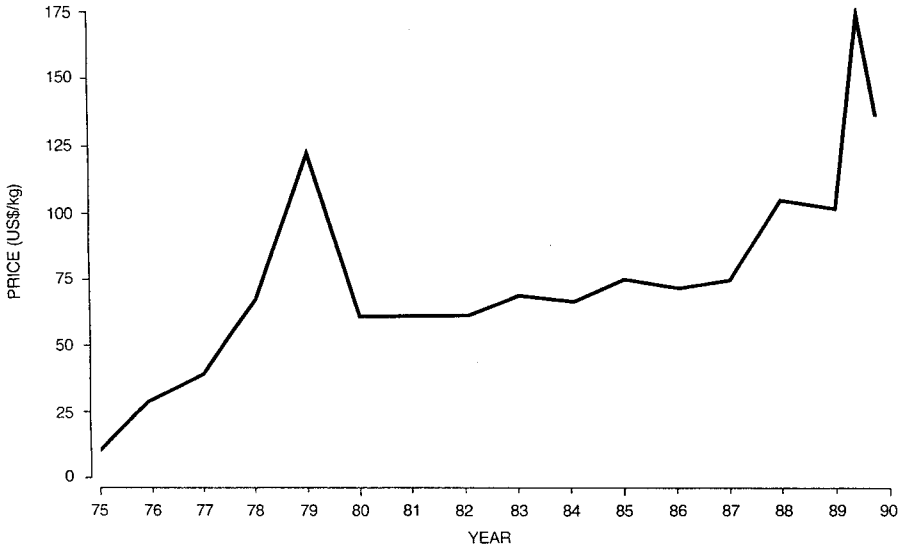


Fig. 4. New Zealand pool prices for 'A' grade velvet antler from 1975-1990.

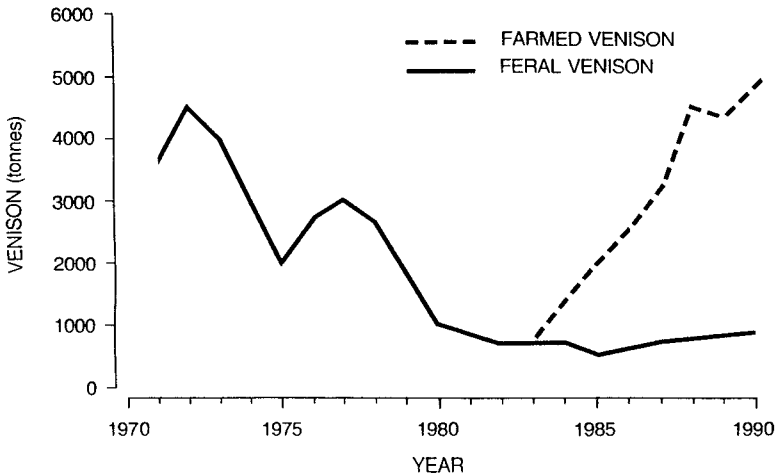


Fig. 5. New Zealand venison production from 1970 to 1990.

antler prices in that the 1979 product price fall was closely followed by a dramatic fall in hind values (Fig. 2 and 3). The value of velvet antler remained stable from 1980 to 1987 at about US \$70/kg and the quality of the crop improved as farmers found out what the market required and how to foster competition among buyers. The early part of the 1989 season saw velvet antler prices rise to more than US \$180/kg although this declined later in the season to around US \$130 for A grade product. Many factors will always affect velvet antler trading and most farmers accept the volatile nature of that industry.

Trading in Deer

Early deer farmers earned most of their income from deer sales. Prices have fluctuated wildly (Fig. 2) with two major "crashes" from prices of US \$ 2,100/hind. The first was apparently due to the velvet antler market, the second in 1985 was certainly due to Government action in taxation. Prices in 1990 are remarkably similar to what they were 15 years ago at the start of deer farming. With a population of a million animals, the industry can now generate a large number of young stock for sale and it is unlikely that deer will be traded above prices which relate to the direct earning power of the animal.

Venison Production

Although venison will become the main product from New Zealand deer farms, in the early days it was less important than animal trading and in recent times has had a lower profile than velvet antler. Fig. 5 shows venison production. Farmed venison production in 1989 is almost exactly the same as the feral export volume in 1972. Because many stags have been retained by farmers for velvet antler production farmed venison volume has remained static from 1988-90. Large numbers of stags instead of being slaughtered at 15 months of age are being held over to take one crop of velvet antler before slaughter. The medium term outlook for venison is an increase in production from 4,500 tonnes in 1990 to 20,000 tonnes by 1995. The industry will need to do an excellent market research and development job if high prices are to be maintained.

Farm Management Systems

Three factors are of paramount importance in the success story of farmed deer in New Zealand.

Physical management - Deer are not really being farmed

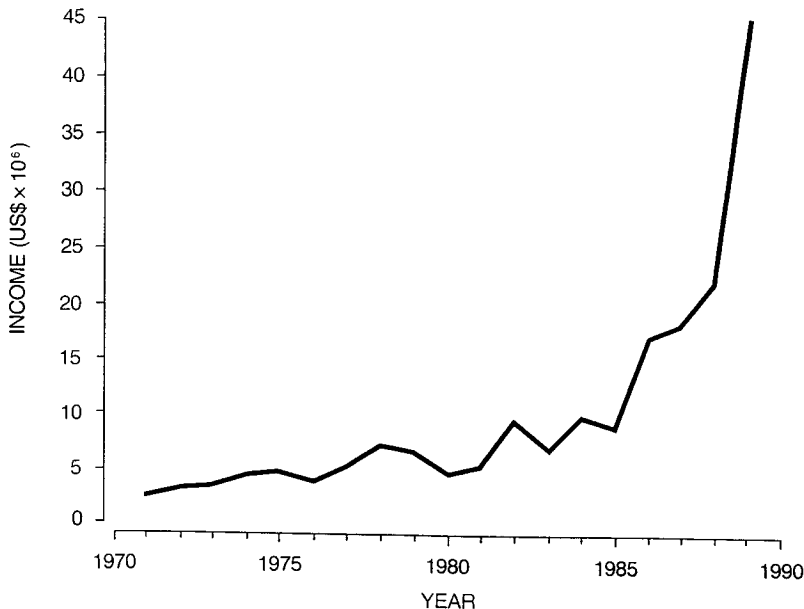


Fig. 6. New Zealand export income from deer products.

until they can be managed and handled "in the manner of livestock". It took 5-10 years before there was enough experience and knowledge to allow fences and yards to be built and animal handling ideas to be proven so that deer could be farmed. Many early problems arose because the deer were wild captured and didn't settle easily. In 1990, deer can readily be yarded on foot, from a farm motorbike or with dogs. Once in the yards they are individually handled often with the use of a whole body crush, weighed, eartagged for identification, inspected for health status and trucked all over the country. Velvet antler removal can now be done cleanly and without pain to the animal.

Feed management - In any livestock enterprise it is essential that feed requirements over the seasons are known. Deer have very different seasonal feed requirements to traditional livestock and it took some time before research workers understood the animal sufficiently well to produce feeding tables. Communication and uptake of new technology was so good that newly established feed requirements were adopted by the majority of deer farmers within one or two years. Stags have a high feed requirement in winter just to maintain weight while hinds have a very high summer feed requirement with calves at foot. All classes of stock can be break rationed on pasture by the use of inexpensive and convenient electric fencing. Hay, silage and some grain supplements can be fed in winter or in a dry summer but most of the feed is grazed pasture the year round.

Breeding management - Performance recording is the key to any animal improvement programme. Production of velvet antler, growth rate and temperament are all individually recorded on deer farms. Superior dams are identified by calf weaning weights and mated with production recorded sires. Progeny testing is now being done and artificial insemination carried out on many farms with frozen semen. The new reproductive technologies are being used to extend the use of some new imported sires from Europe and North America.

Deer Industry Organization

Within five years of the first licensed deer farm a New Zealand Deer Farmers Association was formed to nurture the industry, provide leadership and focus in lobbying Government. The Association is outstandingly successful and now has 2,800 members. The annual conference is always an outstanding event attended by 400-500 people and it has been as high as 900. In 1985 the Game Industry Board was established to research, promote and develop markets for deer industry products. Quality management of both velvet antler and venison are priorities with the Board and the recent launch of a venison quality mark is an important development. "The objective is to provide a consistent guarantee in the industry's markets that product bearing the mark comes from New Zealand deer, meets a set of identified quality standards, and that the product is being offered by proven exporters".

The biggest event in New Zealand's deer farming history is being planned by the NZ Deer Farmers Association at the beginning of 1993. A World Deer Congress will open up New Zealand's deer technology to the international community in a mixture of field visits and technical sessions.

Conclusions

Deer farming in new Zealand is a very new development but it is beginning to make a mark as an export industry. Fig. 6 illustrates graphically the gains that have been made, particularly in the last 10 years. James Guild, President of the New Zealand Deer Farmers' Association, predicts that earnings will exceed US \$ 70 million/yr within 2 years, that by the turn of the century there will be more farmed deer than beef cattle in New Zealand and that the industry's annual earnings at that time should be more than US \$ 300 million. Clearly, the deer as a farmed animal in New Zealand is here to stay.