

Variability in Venison Returns

A study of the impact of the forces that influence the viability and sustainability of the New Zealand farmed deer industry in relationship to the German game market.

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Introduction

The venison industry has been characterised by a number of boom bust cycles that have been highly destabilising for all sectors in the supply chain. During the last ten years we have seen three major cycles with the latest putting the industry and many of its farmers financially on the edge of it's own killing knife.

Long term price and supply stability is the key to growth and has been a catch cry of industry leaders for some time. In recent history, powerful international and unusual events can all be cited as the major initiators of the dramatic change in industry fortune. Nevertheless, the reliance of the NZ industry to date on the narrow constraints of traditional trade and conservative outlets has added a vulnerability to achieving the potential revenue of farm-raised venison for suppliers and processors alike.

This study will examine the relationship that has developed since 1967 with the German game trade and the New Zealand venison industry. To understand how the game trade has influenced core trading and how the venison industry has developed there is a need to define the market structure and evaluate its influence and its driving forces. For example describing what major forces exist and how they have developed over the last twenty years, how the farm raised and feral venison industries has evolved in that time and to give particular attention to what factors have contributed to venison returns from 2000 to today.

The New Zealand Deer Industry (In Brief)

The Beginning (1851-1973)

The first recorded liberation of red deer in New Zealand took place in 1851, followed in succeeding years by wapiti, moose, sika, rusa, fallow, whitetail, chital, mule and samba deer in various parts of New Zealand. By 1906 deer numbers were becoming far too numerous, benefiting from their adaptability and with no shortage of feed and no natural predators.

The first deer cull (initially meaning the eradication of weak deer and stags with poor quality trophy antlers, latterly meaning the eradication of all deer) was undertaken by the Otago Acclimatisation Society and by 1922 had paid out a bonus on 6,300 animals. By this time, deer had been recognised as a potential pest in terms of their impact on the environment and in acclimatisation work.

The New Zealand Forest Service stepped in and began an eradication program in 1927. In 1930 the Internal Affairs Department took over and in their first year culled 16,423 animals, hunters were paid a bonus on the number of tails they produced, by 1934 they were culling 100,000 deer annually.

After World War Two (1945) hunters found that deerskins had become a highly exportable commodity as they were used in self-sealing fuel tanks in planes and car seat covers. By the late 1950's deer culling was well established in both islands. The 1950's also saw the first aircraft used to help the hunters with building materials and food drops.

1953 saw the pioneer Jamie Maddren of Christchurch sending a trial shipment of venison to the USA - this failed to secure a continuing market. However by 1959 Buchanan and Forsyth had cemented a continuing market in the USA and the feral venison industry was born.

During Easter 1963 the first commercial helicopter recovery of deer in the Matukituki Valley of Lake Wanaka, Central Otago was undertaken - 110 deer were successfully delivered to Taylor's Wanaka Venison Factory and a marginal profit was made, which proved it could be made into a business.

The early game packing and export regulations became law in 1967. This regulation was introduced to prevent exporting companies from exporting product that was unfit for human consumption, which would have damaged or halted the emerging industry. The Minister of Agriculture now had control of the export product through the use of meat inspectors and certification. At this time West Germany was New Zealand's major market.

Annual exports peaked at just over 4,000 tonnes in 1972 and 1973.

The Development of Deer Farming in New Zealand

By the mid 1960's it was becoming evident that the deer numbers would not be able to stand up to the pressure of hunting and it would soon become uneconomic for the industry to survive on solely killed game. 1968 saw the first capture and relocation of deer for research to Professor Coop at Lincoln College, to study if deer could successfully be held on improved pastures and handled and farmed. By 1972/73 it was clearly established that deer did breed in captivity and their stocking rate was comparable to sheep at 1.5 stock units.

Following intensive lobbying, 1969 saw an amendment in the Noxious Animals Act allowing farming of deer by licence holders. Until then, those that were selling and buying deer were contravening this Act, as deer were classed as a Noxious Animal. The first licensed deer farm in New Zealand was established in 1971 in Taupo, with 25 further farms being established relatively quickly including a Ministry Of Agriculture's Research Division farm at Invermay Mossgiel. This initiative followed Lincoln College's decision to move into other areas of work and Dr Jock Allison developed the, soon to be regarded as, foremost deer research unit in the world under the leadership of Dr Ken Drew with a dedicated research team that had strong connections with the foremost early farmers.

The New Zealand Deer Farmers Association was established in 1975 to provide a structure for co-ordinated discussions between deer farmers and thereby collective development of the deer industry.

The other major players in the deer industry were the processors and exporters of deer products. In the early 1980's this group formed a representative body, The New Zealand Deer Industry Association, NZDIA, as a forum for communication of their issues and joint initiatives.

The factors contributing to the development of a farmed deer industry were:

- The European market demand for venison;
- A falling supply of venison producing animals
- The passing of legislation permitting farming of deer by license holders
- The ability to source large numbers of deer from feral stocks to rapidly establish a live stock base
- The evolution of the capture of live deer from helicopters
- A growing velvet market in South Korea
- A taxation incentive and a strong interest in a new initiative by key entrepreneurial figures.

(Dynamics of supply and demand for New Zealand venison and velvet, MAF Paper 1994/2002)

Prior to 1981 farmed deer could be shot in the paddock provided that they were identified as farmed when they were sent to the game packinghouse. The venison from those farmed deer received a brown stripe and it was specifically excluded from the major West German market. This created a sudden growth in the number of deer being presented with no ears, as farmed deer were either earmarked or tagged. This forced the director of MAF, John McNab, to stipulate that deer had to be received ears on.

Early in 1981 he abruptly warned that deer farmers had three months before the informal arrangement, as it was known, which permitted on farm slaughter, would cease. After nine months, on farm shooting was prohibited. This forced the industry to construct purpose built facilities known as DSP's or Deer Slaughter Premises. These had their own set of regulations and continued to define deer as game as

distinct from farmed stock, which has both profound market and internal implications for processors, industry and the market. This was in terms of tariff relief and the early exclusion of the traditional meat processors from the deer industry. With the advent of DSP's and transport to the plants, deer would receive antemortem and post-mortem inspection and have the same high hygiene standard that was demanded of the whole of New Zealand's export meat industry. This opened up access to markets, which previously had not permitted the import of hunted deer.

As the first DSP's were being built the Deer Farmers Association moved to establish a Game Exporters Advisory Committee which first meet in December 1981. Its purpose was to "coordinate activities in export and marketing related matters and to establish working guidelines and standards to be adhered to on a voluntary basis, pending establishment of the proposed Game Industry Board."

It was not until February 1984 that the Game Industry Board (GIB) held its first meeting, the GIB was established under the Primary Producers Marketing Act Regulations of 1985. The industry by this time had grown to include 2500 farmers.

The Game Industry Board was established in 1984 with a charter to assist in the orderly development of the game industry and in the marketing of game and products derived from game. It had no commercial role, (unable to buy or sell product) regulatory functions (export licensing, quota management) it only has the power to strike a levy for industry good activity in orderly market development, and collected at DSP's and velvet processors.

1985 to 1993 saw what would have to be the most turbulent and critical times for the industry or, as NZDFA president, James Guild, stated in his address to the First World Deer Farming Congress in 1993, "a period of re adjustment"

"This was a period of crashing livestock values, falling production returns, political intervention, farm bankruptcies, industry division and disagreement. To illustrate this readjustment, a telling example is the change in capital valuation of yearling hinds. In 1977 they were worth \$600 to \$700/head. By 1985 they had reached \$4,000/head, with some sales at \$5,000/hd but by 1992 values for lighter weight yearling hinds were worth \$150/hd, and increasing to between \$200 and \$300/hd.

"The main reason for this dramatic change of values was due to the change in the livestock taxation standard values. Deer farmers had enjoyed a livestock valuation system based on statutory imposed values for tax purposes. The novelty and scarcity of deer had rapidly driven market values upwards creating opportunities for substantial tax write-offs. This in turn attracted investment from the urban economy, and the deer industry experienced an agricultural version of a share market boom.

"The review of primary sector taxation in 1985 put an immediate stop to the rapidly expanding deer industry. It was the introduction of a tax on unrealised income based on earlier valuations of their livestock, the share market crash, and impact of an international recession for deer farmers and investors that created an environment where breeding hinds became unattractive to farm and deer farmers focus shifted to finishing and velvet antler production."

(James Guild World Deer Congress 1993)

(James Guild World Deer Congress 1993)

April 1986 - the impact of the Chernobyl Nuclear power plant disaster caused consumption of venison in the game season to fall as wild deer in Europe were found to have become affected with small doses of radiation. At this time New Zealand farm raised venison was not differentiated from European hunted venison.

Venison imports into Germany decreased from 11,803.03 tonnes in 1985 to 8,812.80 tonnes in 1986, a decrease of 25.3%.

1989 heralded the collapse of USSR; with the former communist states using every means at their disposal to obtain foreign currency Strategies that impacted NZ included.

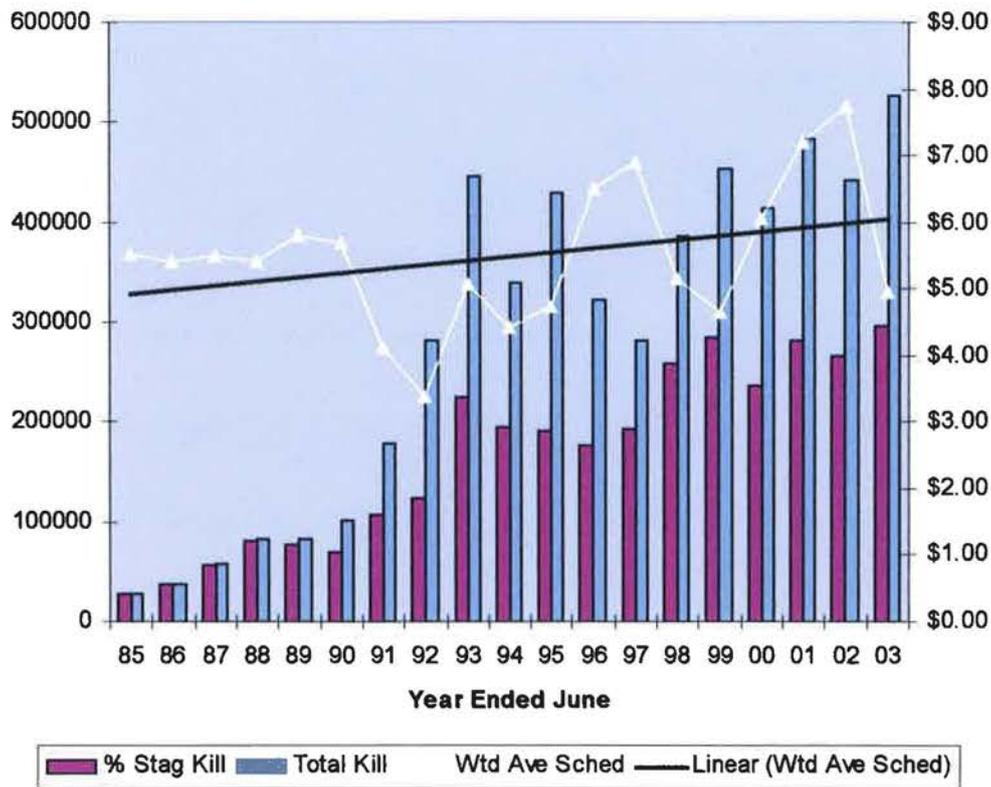
- 1 The export of enormous quantities of East European venison to West Germany that virtually collapsed the market.
- 2 The collapse of the Korean velvet market in 1991 due to the oversupply of velvet into Korea from the USSR.
- 3 Rapid expansion and a lack of confidence in the NZ industry as a result primarily due to the collapse of the velvet market.

*1991 The GIB adopts the 'On-Farm Quality Assurance Program'.
December 1992 the GIB established "Cervena® Company Ltd"*

In 1992 the Chairman of the Game Industry Board, Tom Williams stated in his annual report "In 1984 we established the New Zealand Game Industry Board. In 1992 the environment we operate in has changed, and it is timely to review whether that name is still appropriate.

We are no longer in the 'game' industry; we are the farmed deer industry."

Figure 1.
Annualised production in relation to weighted schedule, with stags as percentage of total kill numbers.



Source: Statistics New Zealand (SNZ) year ending 30th June
 GIB production figures

In 1987 37,074 animals were killed, by 1993 445,707 animals were killed - an increase of 1200%. It is also of interest to note that numbers of hinds killed have increased from 74,000 in 1987 to 220,740 in 1993, an increase of 146,740 or nearly 198.29%.

1992 Fortex's Summit plant in Rotorua and Venison New Zealand's Fielding plant become the first two meat plants in New Zealand to be awarded ISO 9001.

April 1993 GIB launched Cervena® in New Zealand and USA

The strategies behind Cervena® were

- Use Cervena brand name to differentiate New Zealand product
- Positioned as Natural Tender Venison
- Emerging markets of USA, Canada, New Zealand and Australia targeted initially
- In overseas markets, reinforce origin through 'The Taste of New Zealand' positioning
- Targeted at restaurant chefs, with emphasis on fine cuisine
- Emphasises great taste, excellent nutritional value and year round availability

Venison export marketing companies franchised by Cervena Co to use Cervena® brand and marketing material

Cervena appellation is restricted to Nth America and NZ. Only premium cuts qualify, and franchised exporters may only Source use the appellation.

Figure 2

Exports of Chilled venison into the USA

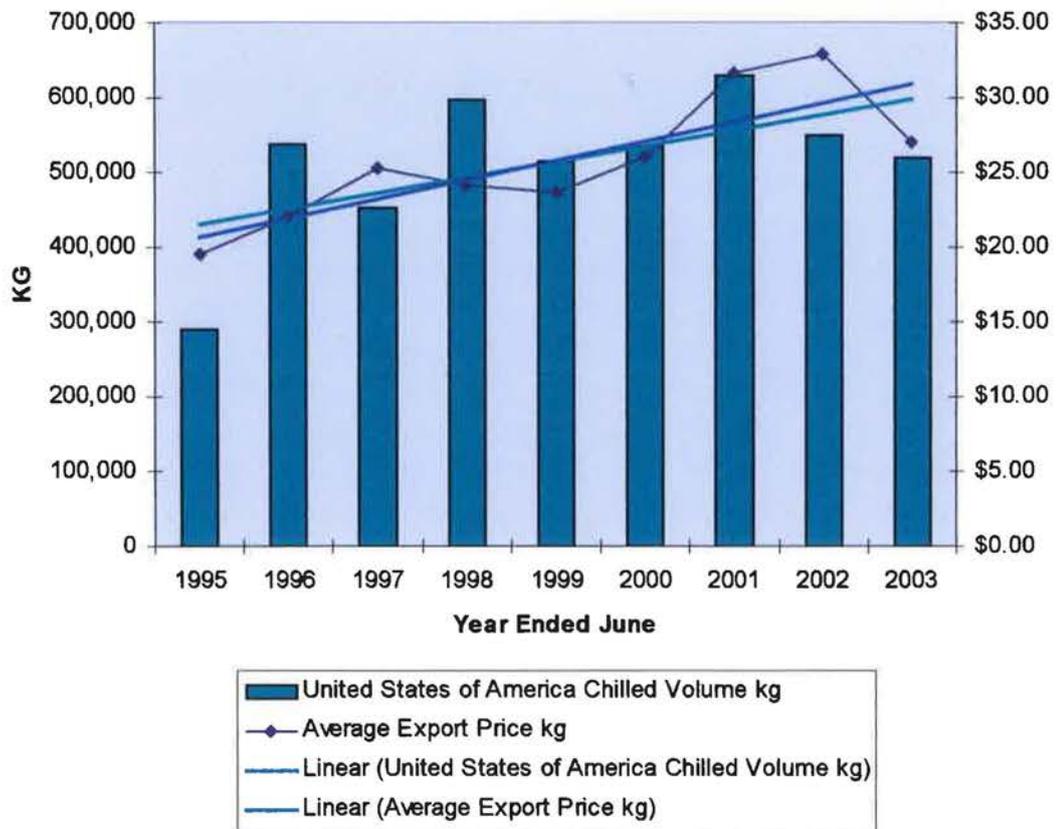


Figure 2 shows a small increase in Chilled Venison sales and price to the USA.

Certification Trademark markets "Zeal quality mark"

Use Zeal quality mark to differentiate New Zealand product.

Zeal quality mark is used in all other venison markets and applies to all cuts. Licensed exporters may only use the mark.

Emphasises consistent quality standards and year round availability

Established European markets targeted initially

Targeted at the restaurant trade

Venison export marketing companies licensed to use Zeal quality mark by New Zealand Game Industry Board

: NZGIB Annual report 1992

Venison New Zealand and New Zealand Venison went into receivership in late 1993. European market indicator prices fell 40% after Fortex dumped large volumes of frozen stock, the impact was devastating on industry returns and confidence

Confidence and schedule levels did not increase until June 1994 after Fortex's collapse.

- 1995 to 1997 saw record export earnings with strong international demand for venison, which was reflected in market and schedule prices, due in part to the drop in supply.

Year ended June 1995 22,115.89 tonnes of venison processed down to 17,593.8 tonnes for year ended June 1997 a change of 79.55%.)

- 1996 saw a record FOB export value of NZ\$11.37 per kg for venison, but a 22% fall in velvet export earnings from 1996 to 1997, initiated an increase kill of stags leading up to Christmas 1996. Product was available at the wrong time of year and unsettled the venison markets. Then from January to July 1997 kill levels were low leaving the market without sufficient supply.

From August to September 1997 there was a sudden surge in supply, this unexpected flow of product had a significant effect on our markets in Europe, with importers and distributors left holding high priced product on a falling market. Equally the resultant effect on the deer farmed sector was dramatic.

Quote from Richard Riddiford's Chairman's report 1996/97, regarding short-term horizons.

"Partly this is a structural issue, with assets tied up in property, farmers are vulnerable to cash flow driven decisions. Processors and exporters face similar pressures when profitability is driven by production throughput more than market returns.

"But it also reflects the lack of "long term partnership" attitude both on-shore and in our international markets. The seesaw effect of one sector 'winning' while the other 'losses' from year to year is damaging.

"I have been critical of the actions of deer farmers over the past two years withholding stock when venison markets have been desperate for product. There is no satisfaction when warning of dissatisfied customers, lost credibility and falling returns come to pass.

"In fairness, I must also question exporters management of our international markets."

- 1998 velvet prices were hit hard by the Asian economic crises, velvet export sales plummeted from \$48.7m in 1997 to \$23m in 1998 (GIB annual report 1997/98), leading to an increase kill of stags through the period of 1998 to 1999 - an increase of over 100,000 animals from 1997 to 1998. (Figure 1)

Figure 3

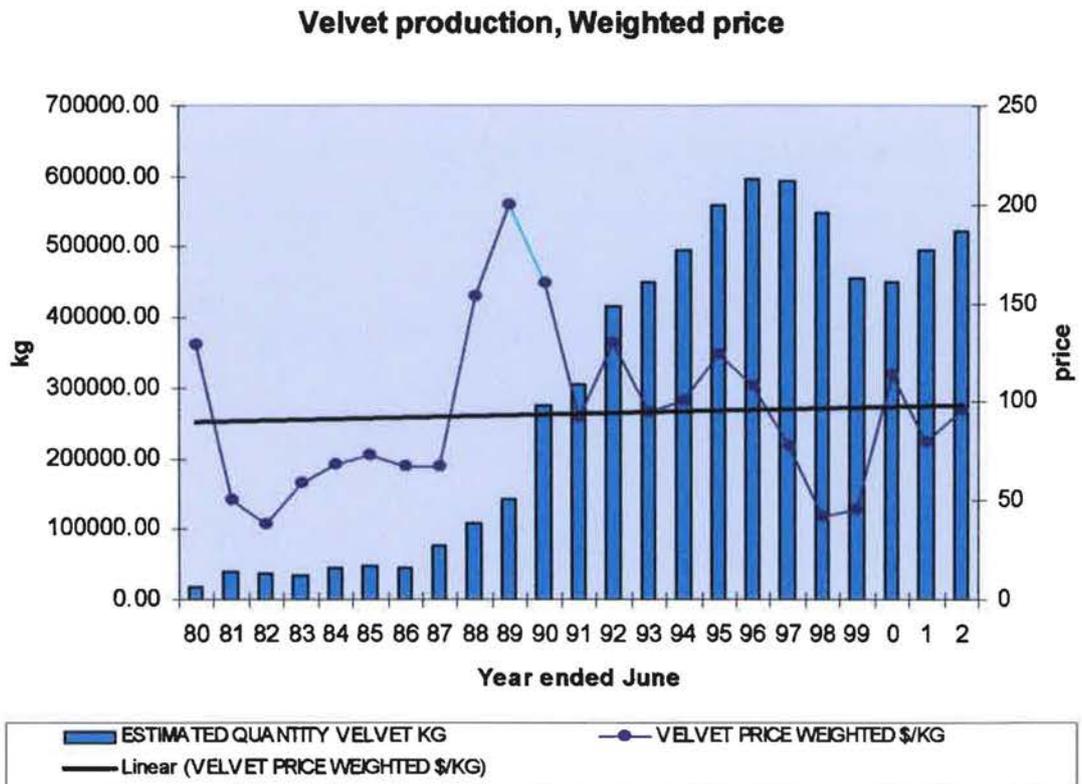


Figure 3 shows just how volatile the velvet market is with dramatic rises and fall in value. It clearly shows the drop in volume due to the kill of over 100,000 velvet stags in 1997/98.

2000 Cervena® became a stand-alone appellation with funding withdrawn by the GIB.

Recent history again reflected events of international significance, largely beyond any influence by the NZ marketers or industry relationships, although all sectors were quick to seize an apparent opportunity and financial windfall.

- 2000/2001 season saw unprecedented demand for venison in Europe driven by the following macro influences

- BSE in beef (food safety issue)
- Foot and Mouth in sheep, cattle and pigs (animal health issue)

These issues were both related to domesticated red meats. The natural reaction was for companies in Europe to look for alternative proteins and it did not matter

weather it was venison, crocodile, buffalo, ostrich, kangaroo etc. This gave New Zealand companies' a false sense of opportunity, as NZ venison seemed to be the obvious choice.

Domestically the environment changed to companies striving to meet orders, increasing procurement pressure and giving very little resistance to increasing prices from the market place, leading to unsustainable returns in the NZ industry. There are a number of reasons why these prices were unsustainable:

- The German Government was making the economy look more buoyant than it was.
- The true costs of the amalgamation of the East and West were starting to bit home.
- The currency change to the Euro included a lot of criticism of price gouging (upping the price) particularly the restaurant trade, and there was a lot of bad press at the time.
- All our major trading partners were in recession, ie USA, Japan and Europe.
- Other cheaper proteins were becoming available

Late 2001 saw a return of confidence in beef sales and consumption that coincided with Argentina being able to use its full year quota plus an additional 10% into Germany after it's previous ban due to foot and mouth was lifted.

The fear of quota allocation is that if you do not use it, you my lose it, so Argentina filled it's quota in a very short time at a price that it could move the product, previously suspect (from a food safety angle) product at €3-4/kg for high value Strip loin of beef. At this time most importers were holding expensive venison at prices never before seen.

Venison demand was totally undercut. It did not just ease it ceased totally.

One company reported that over the Christmas New year period of 2001/2002 you could not give venison away, due to high stocks:

- in the market place
- on the water
- in New Zealand

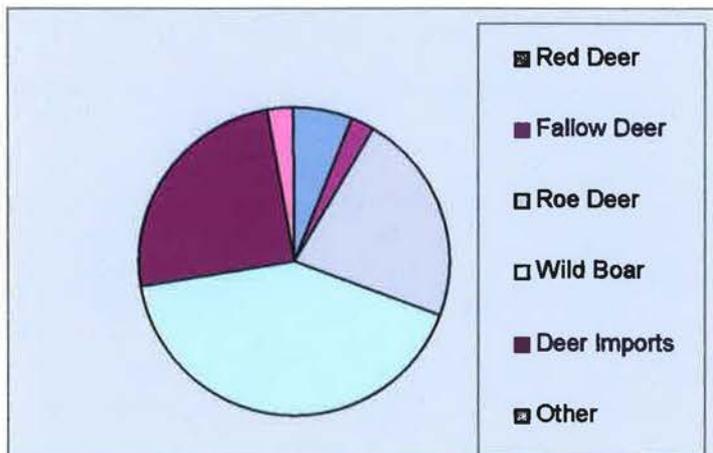
This led to companies in New Zealand and Germany having to freeze down expensive chilled product and sell it over the next two years trying to minimise their losses as product found its way through the market.

To quote from an importer in the market, " The biggest damage however was created by the driven price policy. They did believe they could dictate the prices, and with that they squeezed the price screw until it broke."

A Review of the Traditional Game Trade in Germany

Figure 4

German Game Consumption



New Zealand started exporting venison to West Germany in 1967. The strong and traditional demand for game, including venison, is the major reason the New Zealand Deer industry is here today. It is therefore important to review just what the German game trade is.

Hunting in Germany has a huge tradition going back hundreds of years to when royals were the only ones allowed hunting, as a privilege of their land ownership. Hunting takes place in the autumn and early winter months, (September to December). Today, in order to be allocated a 'hunting licence' would be hunters have to pass some serious exams. Under normal circumstances they would have to acquire the knowledge of a Veterinary, Zoologist, or Food scientist to meet the requirements. Whether they have to identify dangerous insects, or developing diseases, it's all part of the requirements of being a hunter in Germany. Hunters are required to be more of a caretaker than a hunter.

Once they are a certified hunter they can go hunting with someone that owns or rents the hunting ground. Being a landowner does not give you the right to hunt that land, you have to own or rent the right to hunt on that land, two very separate titles. As a landowner you are paid a rent and compensated for any damages that has been caused by the animals (especially Wild boars). Hunters cover these costs by the sale of killed animals.

As a hunter they have to manage their resources, i.e. the land, forest and animals - these include observing and counting animals, feeding during the winter period, forest regeneration and submitting the acquired knowledge to the local governing body. There are heavy penalties if they kill a male that has not been permitted.

Table 1: German Hunting, Farmed production and imports.

| | Numbers Killed | | | Tonnes | | | |
|---|----------------|---------|-----------|---------------|---------------|---------------|---------------|
| | Kg/animal | 1999/00 | 2000/01 | 2001/02 | 1999/00 | 2000/01 | 2001/02 |
| Red Deer | 65 | 51 200 | 53 241 | 57 593 | 3 328 | 3 461 | 3 621 |
| Fallow Deer | 35 | 39 140 | 45 609 | 48 951 | 1 370 | 1 596 | 1 614 |
| Roe Deer | 12.5 | 892 500 | 1 071 236 | 1 060 272 | 11 156 | 13 390 | 13 253 |
| Muflon | 20 | 5 600 | 5 869 | 6 270 | 112 | 117 | 125 |
| Sika | 30 | 840 | 894 | 1 023 | 252 | 27 | 31 |
| Chamois | 15 | 3 800 | 4 087 | 4 237 | 57 | 61 | 64 |
| Wild Boar | 41 | 403 700 | 350 976 | 531 887 | 16 552 | 14 390 | 21 807 |
| Hare | 4 | 401 800 | 442 127 | 466 350 | 1 607 | 1 769 | 1 865 |
| Rabbit | 1.5 | 191 800 | 188 172 | 168 825 | 288 | 282 | 253 |
| Pheasant | 1.25 | 271 400 | 336 908 | 318 821 | 339 | 421 | 399 |
| Wild Ducks | 1 | 588 000 | 516 868 | 549 118 | 588 | 517 | 549 |
| Pigeons | 0.2 | 710 000 | 749 729 | 831 216 | 142 | 150 | 166 |
| Total Hunted | | | | | 35 791 | 36 182 | 43 748 |
| Imports Tonnes | | | | 1999 | 2000 | 2001 | 2002 |
| Wild Boar | | | | 3 218 | 3 137 | 3 643 | 3 071 |
| Hare | | | | 1 910 | 2 385 | 1 999 | 1 698 |
| Rabbit | | | | 6 896 | 6 755 | 11 565 | 7 589 |
| Deer | | | | 16 133 | 17 742 | 20 473 | 15 132 |
| Total Imports Tonnes | | | | 28 157 | 30 019 | 37 680 | 27 490 |
| Total Consumption Tonnes | | | | | 65 810 | 73 862 | 71 238 |
| Consumption Per kg Head @ 82 million people | | | | | 1.24 | 1.11 | 1.15 |

Source, German Statistics Department Year Ended 30th March

Germany is a large consumer of game meats. Game includes hare, springbok, impala, deer, kangaroo, pig, chamois, rabbit, pheasant, partridge, wild duck and ringdove

Their other main supply of game venison is from deer farms, there are over 2,000 deer farms stocked mainly with Fallow deer, and the average size of these farms is around 18 deer. They have a restriction on the capture of feral deer so the growth of deer farming is constrained by the non-availability of breeding stock.

Farmed animals are shot on the farm and sold to local restaurants and retailers - this can only be done during the game season.

Figure 5

% of Chilled Venison's Volume and Value against Frozen Venison, Total Exports

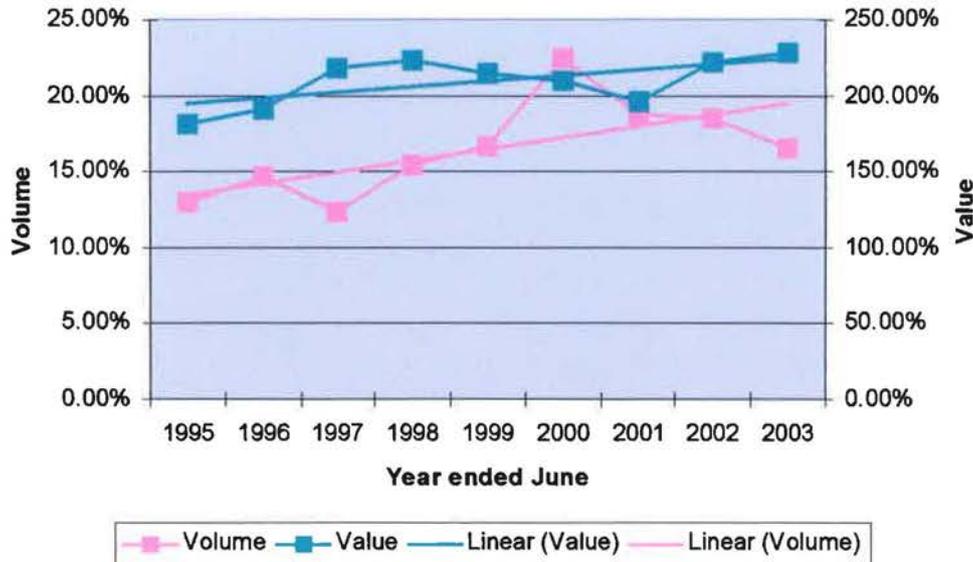


Figure 5 shows that chilled venison is increasing in volume and the difference in value is increasing against frozen venison, in contrast to the German market, figure 6 where the difference in value is decreasing.

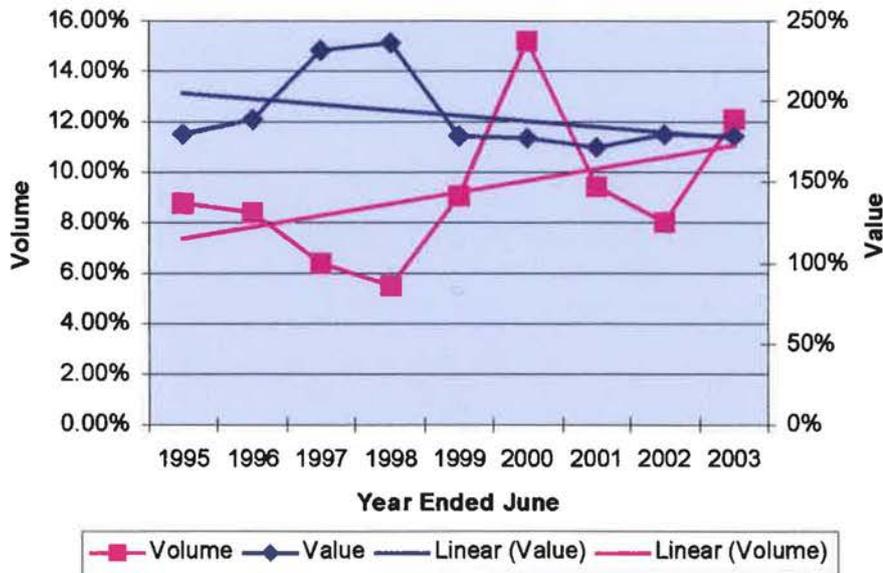
Current Issues Facing the Venison industry

- **To Manage Supply and Demand**
 - Producers withholding stock when the schedule is high, when the market wants it and selling stock when the schedule is low, when the market (game trade) does not want it. Figure 1
 - Poor reputation in the market place for our business relationships - too many times we have either oversupplied or undersupplied the market.

- Processors, importers forward buying product 12 months of the year for a 3-4 month selling season, where we are competing with a lot of other imported and domestic hunted products.

Figure 6

% of Chilled Venison's Volume and Value against Frozen Venison, in the German Market



In figure 6 it shows how much more chilled venison is worth to the industry, it is only 12% of our exports into Germany but is worth 190% more than frozen venison per kg.

- Processors exporters competing for procurement and again in the market place.
 - This has to be a no win situation, company's in the market undercutting each other, when they should be working more closely together ie integrated marketing. Procurement competition does not give a true market indicator to producers as well as leads to over inflated prices short term which generally result in poor prices long term, 2000 to present day is a prime example, figure 1.

- Differentiation
 - Attempts at differentiation have proven very costly and have given little return to the producer investors.

In 2002 50.78% of New Zealand's venison went into Germany, representing 24.22% of that region's venison consumption, and only 11.48% of that region's overall game needs. This means that we are always going to be price takers not price makers.

By way of an example, this quote is from an email received from an importer in Europe, dated 1 Jul 2003. Quote "The Game Manufacturer's can buy, without larger problems in Hungary, Poland or in other EU countries and they pay the 'price setter' bone-in Haunch €2.00/2.10. With that you can calculate yourself that the boneless Legs are around €2.70 and the 4 cut leg standard at €3.60."

➤ Cervena®

This is an appellation created to provide a product definition of prime New Zealand farmed venison. The Cervena® appellation is currently under review in order to establish what role it might play in the continuing development of the venison industry.

To this point, stakeholders have invested \$18M in support of Cervena® and Cervena® programmes. Not all processor/exporters have chosen to market under the appellation, some have chosen to take a more branded approach (alongside the Zespri of NZ Kiwi Fruit). Brands such as Silver Fern, have been developed by its owner PPCS, with investment solely from its Co-op members who by default have also invested in the Cervena® appellation through NZGIB levies.

The critical question the venison industry is asking itself is, "What benefit have these programmes delivered to its producers?" It has been discussed earlier in the project that the majority of our venison production still goes to the German game market. As an industry we have not attempted to differentiate our product to game consumers in Germany. It should be noted that while NZ calls deer meat "venison", in European countries, venison is a collective word meaning game meats.

Whilst Cervena® may have been introduced to some of our markets too early, its principals would find more acceptance in the minds of today's consumers. Consumers are looking for red meat that is healthy and raised in a natural environment.

Competition for red meat proteins has seen industrialisation of farming practices to produce consistent and cheap meat products - the NZ venison industry staunchly refuses to follow this path. The dilemma for our producers is that investment in maintaining our products image is not reflected in stabilisation of farm gate returns.

➤ Exporters investment in the market place, current and potential markets. (Retail, health, restaurant chains, airlines etc) niche markets inside the demographic market

Do processor/exporters have an incentive to build new markets and return the maximum value to the New Zealand producer, or do they just work on margins?

For example, when the schedule is low their exposure is less – ie less interest, product is easier to move, and they have greater margins to play with. You only have to look at an example of bull farmers who are traders working on margins only.

A Buy a 250kg bull at \$3.00/kg or \$750hd and hope to sell it with a schedule at \$3.50/kg at 300kgCW or \$1,050hd, a margin of \$300, with interest at 7% for 9 months of \$39.37, profit before costs is \$260.63.

B Buy a 250kg bull at \$2.00/kg or \$500hd and sell on a schedule of \$2.70 at 300kgCW or \$810 hd, a margin of \$310, with interest at 7% for nine months is \$26.24 profit before costs is \$283.76.

In example A the risk is higher for the schedule to go down than it is for it to raise, greater risk. But in example B the risk is a lot less for the schedule to fall and there is a greater chance that it may raise, a lot less risk and better business.

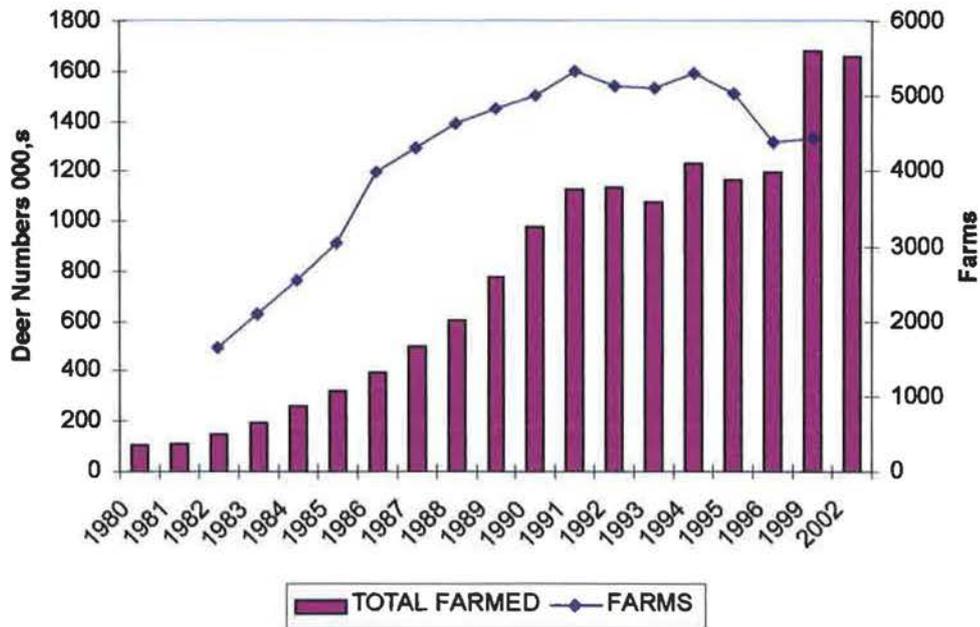
Another example. Company A develops a new product and markets it at a cost of \$10 million. Company B comes along after getting the product out of the market, analysing and then copying it at a fraction of the cost. Company B then offers the same product to the same market at a reduced cost, because they do not have to recover the cost of the \$10 million invested by company A.

- A lack of knowledge about what the markets wants:
 - From chef requirements to, cash and carry stores, to the person buying it to cook at home or on the BBQ, to airlines, health stores and health related options i.e. rest homes, hospitals and restaurant chains.
 - The trends and future competitors in the markets - not just from game products but from other proteins ie beef, lamb, pigs, poultry, fish etc

- Animal welfare, traceability and sustainability
 - More and more we are hearing that the market wants traceability and knowledge that the animals are looked after in a caring environment that is not damaging to the long-term health of this planet. For example we only have to look at the fact that velveting is not accepted in Europe and supermarkets in England will not accept venison of farms that velvet their deer.

- Competition for land use in New Zealand not just from forestry, life style blocks, expanding urban areas but also from other farming alternatives, sheep, beef and dairy.

Figure 7



Source, SNZ, year ending 30 June

Figure 7 shows that the number of deer farms peaked at 5340 in 1991, with an average of 212 deer per farm and there has been a steady decline in farm numbers till 1996 when numbers reached their lowest since 1991 at 4427 farms, with an average of 272 deer per farm.

Most deer farmers have more than one class of stock so are fully aware of changes in farm gate returns. After all, most modern NZ farmers will compare returns on different livestock classes, the base for this comparison will be kilos of grass consumed and turned into gross revenue.

As an example, current average breeding hind performance is returning a gross margin of \$21.48/SU (after interest), which is a return on capital of 24%. Current average breeding ewe performance is returning a gross margin of \$56.63/SU (after interest), which is a return on capital of 70%.

Under current market conditions farmers of breeding hinds require weaner values of \$3.50 /kgLWT for weaner stags and \$3.00 /kgLWT for weaner hinds. At these values the finisher requires a net schedule of \$5.75/kg C.WtT to achieve 12 cents/kgDM and \$6.00/kg C.WtT to achieve 14 cents/kg DM. This is compared to a moderate performance breeding ewe operation.

(See Gross margins in Appendix)

Conclusions

- Differentiation of New Zealand Venison
 - Going head to head with other game products is a no win situation, we need to be looking at branding in Europe and moving away from being called "game", it is to important to note that Venison means "Game Meat". Cervena® may have a part here, the Brand is already registered and legally protected in 40 international markets.
 - Using the Generic brand "New Zealand Farm Raised Venison" is not enough. To most people, where is and what is New Zealand? Farm raised?? How in sheds, in the open, are they velveted? Venison means Game Meat. Clean and Green, every other country is clean and green. We will have to be a lot smarter if we are going to market venison on the international market, not just sell it as in the past.
 - New Zealand venison comes from a game animal that we have domesticated; it is farmed alongside other domesticated animals, ie sheep, cattle, ostrich. It is also processed by the main three meat companies in New Zealand, PPCS, Richmond's, and Alliance who have approximately 80% plus of market share, so is it game or is it red meat?
The Europeans know that we farm deer, so why do we call it game?
 - What would be the ramification with Tariffs and Quotes if venison were moved from game meat to a red meat? These are questions that need to be answered. Quotas have a bad rap in New Zealand but are they all that bad? It would bring stability to the German market if they knew just how much product they were going to get in any one year, if we take the example of Quotas of Lamb into the USA Prices have could increased as well. It would also force companies to look at alternative markets as in the past they have found it to easy to sell venison into Germany and work on a margin only.
However the industry does not want to underestimate the benefits of game meats as they have very good health profiles in terms of nutritional value.

Table 2
Nutritional Profile – based on 100 gm portions

| | Calories | Fat | Cholesterol | Protein | Iron |
|---|----------|-----|-------------|---------|------|
| New Zealand Venison Leg cut, roasted | 157 | 6 | 73 | 27 | 4 |
| Beef topside, lean roasted | 183 | 5 | 81 | 34 | 4 |
| Veal Fillet, lean, roasted | 230 | 12 | 115 | 32 | 2 |
| Lamb Leg, roasted | 199 | 12 | 92 | 23 | 3 |
| Pork Leg Steak, lean grilled | 251 | 13 | 102 | 33 | 3 |
| Chicken Leg, Skinless grilled | 197 | 11 | 148 | 24 | 3 |
| Salmon, broiled | 165 | 6 | 71 | 25 | 1 |

Source DINZ

- Need to start from where the product is consumed, and work backwards.
 - In the past DINZ has taken the market initiative from the people that sell in the market place, but they are not actually dealing in the market place, the chef and consumer. We need to spend more time talking to Butchers in supermarkets, chefs in restaurants and find out what they want and make venison more user friendly, both the chef and the butcher do not have the time or the expertise to cut down venison into usable pieces, they want to be able to get a product that is user friendly, ie consistent price, quality and cut.
 - Five items that sell in Europe
 1. Leg Roast
 2. Minnie Leg Roast
 3. Medallions or Scallops
 4. Goulash
 5. Stir Fry
 - Research what size packages, ie 4 Medallion or 6? What size 1kg or 500gram packs? What does a chef/ consumer do with a 2.5kg Back Strap, if they only need half of it?
 - Set measurable targets and report on annually.

➤ Improve market monitoring and information.

- More dialog between the market and the industry in New Zealand, take note of what companies and those in the market are saying, an example of this is during the FGM presentation May 2001 Graham Brown noted that the current Market issues were,
 - ✓ Volatility due to Foot and Mouth and BSE,
 - ✓ Chefs looking for better value, with a sharper focus on other proteins, and greater attention to centre? plate costs.
 - ✓ Major economies cooling.
 - ✓ Three significant closures of in New York late April.
 - ✓ Fashionable restaurants in less expensive neighbourhoods and industrial areas.

Here was a warning to all the industry that increasing pressure on the value within New Zealand was resulting in the market looking at their bottom lines, and the shift to less expensive protein was already happening ie Kangaroo and Ostrich.

- Working with Meat New Zealand and incorporate their model.

➤ Diversification in the market and within the market.

- We sell only 16% of total venison chilled but at 225% more value than frozen, we have to find more chilled markets, that are supplied 12 months of the year to take the risk and cost out of buying venison 12 months of the year for a 4-months selling season.

Some examples are,

- Health food agencies. ie Jenny Craig, Gyms that offer food.
- High value retirement homes and hospitals.
- Targeting age or cultural groups
- Restaurant chains

- Long term contracts and building solid relationships in the market and at home, to long it has been them and use, without one sector or the other we do not have an industry, The Game Industry Board recognised this and changed there name to Deer Industry New Zealand with four Producer appointees and three Venison processors/ exporters and one velvet exporter a true industry board.
- Set measurable targets and report annually.

“We are never going to exploit the farm meat industry as long as we continue to hide behind the game meat banner.”

Weekly Average Schedule

| | | Year | | | | | | | |
|----------------|------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 |
| | Week | | | | | | | | |
| 1-Jan | 1 | \$5.96 | \$6.50 | \$4.86 | \$4.51 | \$5.83 | \$4.40 | \$5.20 | \$7.06 |
| 8-Jan | 2 | \$5.90 | \$6.41 | \$4.75 | \$4.55 | \$5.73 | \$4.38 | \$5.09 | \$7.05 |
| 15-Jan | 3 | \$5.88 | \$6.36 | \$4.66 | \$4.55 | \$5.65 | \$4.34 | \$5.07 | \$7.01 |
| 22-Jan | 4 | \$5.98 | \$6.26 | \$4.65 | \$4.58 | \$5.56 | \$4.34 | \$5.04 | \$6.94 |
| 29-Jan | 5 | \$5.98 | \$6.23 | \$4.63 | \$4.58 | \$5.56 | \$4.31 | \$5.00 | \$6.93 |
| 5-Feb | 6 | \$5.98 | \$6.25 | \$4.61 | \$4.58 | \$5.60 | \$4.31 | \$5.01 | \$6.86 |
| 12-Feb | 7 | \$6.00 | \$6.23 | \$4.61 | \$4.58 | \$5.61 | \$4.31 | \$5.01 | \$6.83 |
| 19-Feb | 8 | \$6.01 | \$6.16 | \$4.61 | \$4.56 | \$5.66 | \$4.32 | \$5.06 | \$6.79 |
| 26-Feb | 9 | \$6.08 | \$6.01 | \$4.63 | \$4.56 | \$5.63 | \$4.37 | \$5.06 | \$6.74 |
| 5-Mar | 10 | \$6.10 | \$5.93 | \$4.61 | \$4.56 | \$5.60 | \$4.38 | \$5.06 | \$6.74 |
| 12-Mar | 11 | \$6.16 | \$5.88 | \$4.61 | \$4.56 | \$5.58 | \$4.37 | \$5.16 | \$6.73 |
| 19-Mar | 12 | \$6.20 | \$5.88 | \$4.60 | \$4.55 | \$5.58 | \$4.38 | \$5.19 | \$6.67 |
| 26-Mar | 13 | \$6.25 | \$5.83 | \$4.50 | \$4.55 | \$5.56 | \$4.36 | \$5.21 | \$6.69 |
| 2-Apr | 14 | \$6.28 | \$5.83 | \$4.50 | \$4.55 | \$5.55 | \$4.36 | \$5.21 | \$6.69 |
| 9-Apr | 15 | \$6.28 | \$5.88 | \$4.46 | \$4.55 | \$5.55 | \$4.37 | \$5.23 | \$6.73 |
| 16-Apr | 16 | \$6.28 | \$5.91 | \$4.46 | \$4.55 | \$5.56 | \$4.37 | \$5.29 | \$6.83 |
| 23-Apr | 17 | \$6.31 | \$5.91 | \$4.40 | \$4.51 | \$5.66 | \$4.39 | \$5.35 | \$6.83 |
| 30-Apr | 18 | \$6.33 | \$5.95 | \$4.36 | \$4.53 | \$5.68 | \$4.42 | \$5.45 | \$7.10 |
| 7-May | 19 | \$6.38 | \$5.96 | \$4.33 | \$4.53 | \$5.70 | \$4.43 | \$5.57 | \$7.18 |
| 14-May | 20 | \$6.50 | \$5.98 | \$4.25 | \$4.61 | \$5.71 | \$4.49 | \$5.65 | \$7.33 |
| 21-May | 21 | \$6.50 | \$6.03 | \$4.16 | \$4.66 | \$5.78 | \$4.51 | \$5.80 | \$7.45 |
| 28-May | 22 | \$6.51 | \$6.06 | \$4.10 | \$4.71 | \$5.85 | \$4.53 | \$5.86 | \$7.59 |
| 4-Jun | 23 | \$6.51 | \$6.10 | \$3.88 | \$4.81 | \$5.85 | \$4.53 | \$5.97 | \$7.73 |
| 11-Jun | 24 | \$6.61 | \$6.11 | \$3.78 | \$4.91 | \$5.90 | \$4.54 | \$6.00 | \$7.92 |
| 18-Jun | 25 | \$6.85 | \$6.13 | \$3.70 | \$5.01 | \$5.98 | \$4.59 | \$6.04 | \$8.02 |
| 25-Jun | 26 | \$7.01 | \$6.20 | \$3.63 | \$5.05 | \$5.98 | \$4.58 | \$6.13 | \$8.15 |
| 2-Jul | 27 | \$7.15 | \$6.20 | \$3.56 | \$5.11 | \$5.93 | \$4.76 | \$6.24 | \$8.33 |
| 9-Jul | 28 | \$7.26 | \$6.20 | \$3.53 | \$5.18 | \$5.76 | \$4.85 | \$6.31 | \$8.43 |
| 16-Jul | 29 | \$7.28 | \$6.20 | \$3.56 | \$5.28 | \$5.65 | \$4.87 | \$6.46 | \$8.51 |
| 23-Jul | 30 | \$7.30 | \$6.20 | \$3.70 | \$5.30 | \$5.56 | \$4.87 | \$6.68 | \$8.65 |
| 30-Jul | 31 | \$7.33 | \$6.20 | \$4.05 | \$5.35 | \$5.51 | \$4.98 | \$6.82 | \$8.73 |
| 6-Aug | 32 | \$7.36 | \$6.20 | \$4.21 | \$5.50 | \$5.48 | \$5.05 | \$6.85 | \$8.82 |
| 13-Aug | 33 | \$7.38 | \$6.23 | \$4.18 | \$5.56 | \$5.43 | \$5.13 | \$6.87 | \$8.82 |
| 20-Aug | 34 | \$7.43 | \$6.23 | \$4.18 | \$5.66 | \$5.43 | \$5.22 | \$6.92 | \$8.84 |
| 27-Aug | 35 | \$7.46 | \$6.28 | \$4.18 | \$5.90 | \$5.43 | \$5.29 | \$6.93 | \$8.82 |
| 3-Sep | 36 | \$7.58 | \$6.30 | \$4.18 | \$6.00 | \$5.43 | \$5.33 | \$7.03 | \$8.81 |
| 10-Sep | 37 | \$7.70 | \$6.21 | \$4.18 | \$6.15 | \$5.42 | \$5.43 | \$7.09 | \$8.75 |
| 17-Sep | 38 | \$7.76 | \$6.21 | \$4.20 | \$6.15 | \$5.42 | \$5.56 | \$7.11 | \$8.75 |
| 24-Sep | 39 | \$7.83 | \$6.21 | \$4.28 | \$6.20 | \$5.40 | \$5.65 | \$7.21 | \$8.71 |
| 1-Oct | 40 | \$7.83 | \$6.21 | \$4.43 | \$6.33 | \$5.38 | \$5.75 | \$7.31 | \$8.71 |
| 8-Oct | 41 | \$7.50 | \$6.20 | \$4.51 | \$6.38 | \$5.36 | \$5.78 | \$7.31 | \$8.88 |
| 15-Oct | 42 | \$7.30 | \$5.95 | \$4.51 | \$6.50 | \$5.35 | \$5.78 | \$7.29 | \$8.60 |
| 22-Oct | 43 | \$7.21 | \$5.76 | \$4.51 | \$6.51 | \$5.33 | \$5.77 | \$7.29 | \$8.54 |
| 29-Oct | 44 | \$7.11 | \$5.73 | \$4.51 | \$6.51 | \$5.30 | \$5.77 | \$7.28 | \$8.44 |
| 5-Nov | 45 | \$7.11 | \$5.63 | \$4.58 | \$6.45 | \$5.09 | \$5.71 | \$7.25 | \$8.06 |
| 12-Nov | 46 | \$7.00 | \$5.60 | \$4.58 | \$6.28 | \$4.93 | \$5.67 | \$7.25 | \$7.77 |
| 19-Nov | 47 | \$6.69 | \$5.53 | \$4.58 | \$6.30 | \$4.86 | \$5.60 | \$7.23 | \$7.60 |
| 26-Nov | 48 | \$6.93 | \$5.46 | \$4.55 | \$6.18 | \$4.77 | \$5.54 | \$7.23 | \$7.38 |
| 3-Dec | 49 | \$6.86 | \$5.31 | \$4.55 | \$6.11 | \$4.66 | \$5.40 | \$7.20 | \$7.20 |
| 10-Dec | 50 | \$6.71 | \$5.08 | \$4.48 | \$6.03 | \$4.58 | \$5.30 | \$7.18 | \$6.91 |
| 17-Dec | 51 | \$6.58 | \$4.91 | \$4.48 | \$5.96 | \$4.51 | \$5.20 | \$7.15 | \$6.62 |
| 24-Dec | 52 | \$6.55 | \$4.91 | \$4.48 | \$5.93 | \$4.44 | \$5.20 | \$7.10 | \$6.55 |
| Average | | \$6.75 | \$5.98 | \$4.33 | \$5.29 | \$5.47 | \$4.89 | \$6.20 | \$7.67 |

Year

| | Week | 1998 | 2000 | 2001 | 2002 | 2003 |
|----------------|------|---------------|---------------|---------------|---------------|---------------|
| 1-Jan | 1 | \$4.70 | \$ 5.68 | \$7.25 | \$ 7.39 | \$ 4.43 |
| 8-Jan | 2 | \$4.68 | \$ 5.65 | \$7.18 | \$ 7.14 | \$ 4.43 |
| 15-Jan | 3 | \$4.68 | \$ 5.62 | \$7.13 | \$ 6.56 | \$ 4.32 |
| 22-Jan | 4 | \$4.68 | \$ 5.60 | \$7.12 | \$ 6.52 | \$ 4.24 |
| 29-Jan | 5 | \$4.68 | \$ 5.62 | \$ 7.09 | \$ 6.48 | \$ 4.23 |
| 5-Feb | 6 | \$4.68 | \$ 5.63 | \$ 7.09 | \$ 6.48 | \$ 4.20 |
| 12-Feb | 7 | \$4.68 | \$ 5.63 | \$ 7.09 | \$ 6.49 | \$ 4.20 |
| 19-Feb | 8 | \$4.68 | \$ 5.65 | \$ 7.09 | \$ 6.49 | \$ 4.20 |
| 26-Feb | 9 | \$4.68 | \$ 5.68 | \$ 7.14 | \$ 6.51 | \$ 4.20 |
| 5-Mar | 10 | \$4.73 | \$ 5.68 | \$ 7.09 | \$ 6.54 | \$ 4.15 |
| 12-Mar | 11 | \$4.75 | \$ 5.68 | \$ 7.20 | \$ 6.52 | \$ 4.10 |
| 19-Mar | 12 | \$4.80 | \$ 5.68 | \$ 7.29 | \$ 6.51 | \$ 4.12 |
| 26-Mar | 13 | \$4.89 | \$ 5.68 | \$ 7.32 | \$ 6.38 | \$ 4.12 |
| 2-Apr | 14 | \$4.91 | \$ 5.70 | \$ 7.40 | \$ 6.26 | \$ 4.12 |
| 9-Apr | 15 | \$4.93 | \$ 5.72 | \$ 7.47 | \$ 6.04 | \$ 4.12 |
| 16-Apr | 16 | \$4.91 | \$ 5.78 | \$ 7.54 | \$ 5.82 | \$ 4.13 |
| 23-Apr | 17 | \$4.91 | \$ 5.82 | \$ 7.66 | \$ 5.61 | \$ 4.13 |
| 30-Apr | 18 | \$4.91 | \$ 5.90 | \$ 7.77 | \$ 5.49 | \$ 4.12 |
| 7-May | 19 | \$4.91 | \$ 5.98 | \$ 7.89 | \$ 5.43 | \$ 4.12 |
| 14-May | 20 | \$4.91 | \$ 6.02 | \$ 8.08 | \$ 5.41 | \$ 4.13 |
| 21-May | 21 | \$4.91 | \$ 6.08 | \$ 8.22 | \$ 5.40 | \$ 4.08 |
| 28-May | 22 | \$4.93 | \$ 6.14 | \$ 8.33 | \$ 5.38 | \$ 4.08 |
| 4-Jun | 23 | \$4.93 | \$ 6.28 | \$ 8.46 | \$ 5.34 | \$ 4.08 |
| 11-Jun | 24 | \$4.94 | \$ 6.37 | \$ 8.58 | \$ 5.30 | \$ 4.08 |
| 18-Jun | 25 | \$4.96 | \$ 6.43 | \$ 8.75 | \$ 5.25 | \$ 4.08 |
| 25-Jun | 26 | \$4.97 | \$ 6.46 | \$ 8.84 | \$ 5.25 | \$ 4.07 |
| 2-Jul | 27 | \$5.00 | \$ 6.49 | \$ 9.02 | \$ 5.28 | \$ 4.07 |
| 9-Jul | 28 | \$5.01 | \$ 6.50 | \$ 9.07 | \$ 5.29 | \$ 4.12 |
| 16-Jul | 29 | \$5.02 | \$ 6.57 | \$ 9.24 | \$ 5.29 | \$ 4.20 |
| 23-Jul | 30 | \$5.02 | \$ 6.70 | \$ 9.37 | \$ 5.45 | \$ 4.29 |
| 30-Jul | 31 | \$5.00 | \$ 6.76 | \$ 9.51 | \$ 5.59 | \$ 4.41 |
| 6-Aug | 32 | \$4.96 | \$ 6.91 | \$ 9.61 | \$ 5.73 | \$ 4.53 |
| 13-Aug | 33 | \$4.87 | \$ 7.01 | \$ 9.71 | \$ 6.11 | \$ 4.68 |
| 20-Aug | 34 | \$4.80 | \$ 7.17 | \$ 9.83 | \$ 6.33 | \$ 4.79 |
| 27-Aug | 35 | \$4.76 | \$ 7.27 | \$ 10.00 | \$ 6.45 | \$ 4.95 |
| 3-Sep | 36 | \$4.75 | \$ 7.44 | \$ 10.06 | \$ 6.61 | \$ 5.05 |
| 10-Sep | 37 | \$4.75 | \$ 7.56 | \$ 10.14 | \$ 6.68 | \$ 5.01 |
| 17-Sep | 38 | \$4.75 | \$ 7.65 | \$ 10.17 | \$ 6.65 | \$ 5.02 |
| 24-Sep | 39 | \$4.81 | \$ 7.71 | \$ 10.17 | \$ 6.55 | \$ 5.12 |
| 1-Oct | 40 | \$4.88 | \$ 7.75 | \$ 10.17 | \$ 6.39 | \$ 5.10 |
| 8-Oct | 41 | \$4.96 | \$ 7.76 | \$ 10.14 | \$ 6.25 | \$ 5.07 |
| 15-Oct | 42 | \$5.04 | \$ 7.84 | \$ 10.13 | \$ 6.01 | \$ 4.96 |
| 22-Oct | 43 | \$5.09 | \$ 7.80 | \$ 10.13 | \$ 5.83 | \$ 4.89 |
| 29-Oct | 44 | \$5.10 | \$ 7.75 | \$ 10.08 | \$ 5.67 | \$ 4.82 |
| 5-Nov | 45 | \$5.12 | \$ 7.66 | \$ 9.93 | \$ 5.42 | |
| 12-Nov | 46 | \$5.12 | \$ 7.58 | \$ 9.79 | \$ 5.18 | |
| 19-Nov | 47 | \$5.15 | \$ 7.45 | \$ 9.48 | \$ 5.02 | |
| 26-Nov | 48 | \$5.17 | \$ 7.39 | \$ 9.16 | \$ 4.76 | |
| 3-Dec | 49 | \$5.15 | \$ 7.32 | \$ 8.74 | \$ 4.59 | |
| 10-Dec | 50 | \$5.13 | \$ 7.29 | \$ 8.28 | \$ 4.49 | |
| 17-Dec | 51 | \$5.11 | \$ 7.27 | \$ 7.72 | \$ 4.43 | |
| 24-Dec | 52 | \$5.11 | \$ 7.27 | \$ 7.59 | \$ 4.43 | |
| Average | | \$4.90 | \$6.68 | \$8.66 | \$6.86 | \$4.39 |

DEER RECONCILIATION & INCOME**OPENING**

| | No |
|----------------|-----|
| Breeding Hinds | 114 |
| Wnr Hinds | 14 |
| Br.Stags | 2 |

CLOSING

| | No |
|----------------|-----|
| Breeding Hinds | 114 |
| Wnr Hinds | 14 |
| Br.Stags | 2 |

| | | | | | |
|-------|-----|-----------|-------|-----|-----------|
| TOTAL | 130 | 234 DSU's | TOTAL | 130 | 234 DSU's |
|-------|-----|-----------|-------|-----|-----------|

PURCHASES

| | No | \$/Hd | \$ |
|--------------|-----|---------|----|
| Master Stags | 0.5 | 2500.00 | |

SALES

| | No | \$/Hd | \$ |
|------------|-----|-------|------|
| Wnr Stags | 50 | \$193 | 9601 |
| Wnr Hinds | 36 | \$144 | 5166 |
| Cull hinds | 11 | \$220 | 2517 |
| Cull Stags | 0.5 | \$300 | 150 |

| | | | | | |
|-----------------|--|--|---------|--------------|----------|
| TOTAL PURCHASES | | | \$1,250 | TOTAL INCOME | \$17,434 |
|-----------------|--|--|---------|--------------|----------|

BIRTHS

87.5 % Fawning

| | |
|------------|----|
| Stag Fawns | 50 |
| Hind Fawns | 50 |

| | |
|-------------|-----|
| CHECK TOTAL | 230 |
|-------------|-----|

DEATHS & MISSING

| | | |
|---------|----|---|
| Hinds | 2% | 3 |
| Weaners | | |
| Others | | |

| | |
|-------------|-----|
| CHECK TOTAL | 230 |
|-------------|-----|

GROSS MARGIN BREEDING HIND - Achieving Mod Sheep Performance

| <u>COMMENTS</u> | <u>PRODUCTION</u> | | | |
|-----------------|-------------------|--------------|-----------------------|--|
| Fawning % | 87.5 STS. | Wnr.Hind Wt. | 48 Kgs | |
| | | \$/Kg.LWt. | \$3.00 nett commision | |
| Deaths % | 2% Hinds | Wnr.Stag Wt. | 55 Kgs | |
| | Weaners | \$/Kg.LWt. | \$3.50 nett commision | |

STOCK Nos. & VALUE

| | No. | SU's | \$/Hd | \$ |
|----------------|------------|---------------|---------|-----------------|
| Breeding Hinds | 114 | 1.8 | \$350 | \$39,900 |
| Wnr Hinds | 14 | 1.6 | \$200 | \$2,800 |
| Br.Stags | 2 | 3 | \$2,000 | \$4,000 |
| | <u>130</u> | <u>234 su</u> | | <u>\$46,700</u> |
| | | | | \$200/su |

REVENUE

| | No | \$/hd | \$ | |
|------------------|--------------|---------------|---------|----------------------------|
| SALES | | | | |
| Wnr Stags | 50 | \$193 | 9601 | |
| Wnr Hinds | 36 | \$144 | 5166 | |
| Cull hinds | 11 | \$220 | 2517 | |
| Cull Stags | 0.5 | \$300 | 150 | |
| | | | | \$17,434 |
| VELVET | 2 Stags @ | 3.50 Kgs/Stag | | |
| | 7 Kgs @ | \$120/kg | | \$840 |
| PURCHASES | Master Stags | 0.5 | \$2,500 | 1250 |
| | | | | (\$1,250) |
| | | | | <u>GROSS INCOME</u> |
| | | | | <u>\$17,024</u> \$72.88/su |

EXPENDITURE

| | | | | |
|---------------|-------------|---------|--------|-----------------------|
| Animal Health | \$5.00/head | | | \$650 |
| Velveting | 2 Head @ | \$20/hd | | \$40 |
| Freight | Head @ | /hd | | |
| Feed | Maize | Tonne @ | /tonne | |
| | Hay | Bales @ | /bale | |
| Other | | | | |
| | | | | <u>TOTAL EXPENSES</u> |
| | | | | <u>\$690</u> |

GROSS MARGIN (before Interest) \$16,334 **GROSS MARGIN (after Interest)** \$11,664 10 %Interest

GROSS MARGIN per HIND \$143.28 * **GROSS MARGIN per HIND** \$102.31 *

GROSS MARGIN per SU \$69.92 * **GROSS MARGIN per SU** \$49.93 *

GROSS MARGIN per KgDM \$0.124 Before Interest **RETURN on CAPITAL =** 35 %
\$0.088 After Interest

Prepared by: R.R.FRASER
Agriculture NZ Ltd

BREEDING HIND - Achieving Mod Sheep Performance

No. Hinds 100
 No. Wnrs Retained 12

Average Weaner Sale Price (\$/hd)

| | | \$150 | \$170 | \$190 | \$210 | \$230 |
|-----------|-------|-------|-------|-------|-------|-------|
| Fawning % | 80.0% | \$76 | \$90 | \$103 | \$117 | \$130 |
| | 82.5% | \$80 | \$94 | \$122 | \$164 | \$221 |
| | 85.0% | \$84 | \$98 | \$113 | \$127 | \$142 |
| | 87.5% | \$87 | \$102 | \$117 | \$133 | \$148 |
| | 90.0% | \$91 | \$107 | \$122 | \$138 | \$153 |
| | 92.5% | \$95 | \$111 | \$127 | \$143 | \$159 |
| | 95.0% | \$99 | \$115 | \$132 | \$148 | \$165 |

Gross Margin/Hind
 After Interest

At 87.5% fawning
 Each \$20.00 change in Average Weaner Sale Price \$/hd equates to \$15.10/hind Gross Margin

At \$190 /weaner sold
 Each 2.5% change in Average Weaner Sale Price \$/hd equates to \$18.85/hind Gross Margin

BREEDING HIND - Achieving Mod Sheep Performance

No. Hinds 100
 No. Wnrs Retained 12
 Stock Units/hind 2.24 (includes retained Wnr.Hinds)

Average Weaner Sale Price (\$/hd)

| | | \$150 | \$170 | \$190 | \$210 | \$230 |
|-----------|-------|-------|-------|-------|-------|-------|
| Fawning % | 80.0% | \$34 | \$40 | \$46 | \$52 | \$58 |
| | 82.5% | \$36 | \$42 | \$54 | \$73 | \$99 |
| | 85.0% | \$37 | \$44 | \$50 | \$57 | \$63 |
| | 87.5% | \$39 | \$46 | \$52 | \$59 | \$66 |
| | 90.0% | \$41 | \$48 | \$55 | \$62 | \$68 |
| | 92.5% | \$42 | \$49 | \$57 | \$64 | \$71 |
| | 95.0% | \$44 | \$51 | \$59 | \$66 | \$74 |

Gross Margin/su
 after Interest

At 87.5% Fawning
 Each \$20.00 Change in Average Weaner Sale Price \$/hd equates to \$6.74/su Gross Margin

At \$190 /weaner sold
 Each 2.5% Change in Average Weaner Sale Price \$/hd equates to \$8.42/su Gross Margin

WEANER STAGS (purchased 55 kg in March, sold at 55kgCW in late Jan)

| | R.1.Stag | R.1.Stag | R.1.Stag | R.1.Stag |
|--|-----------------|-----------------|-----------------|-----------------|
| Buy L.Wt. | 55.0 | 55.0 | 55.0 | 55.0 |
| Buy \$/kg L.Wt | \$3.50 | \$3.50 | \$3.50 | \$3.50 |
| Spiker Velvet (kg) | 0.13 | 0.13 | 0.13 | 0.13 |
| Value \$/kg | \$55.00 | \$55.00 | \$55.00 | \$55.00 |
| Sell L.Wt or C.Wt | 55 | 55 | 55 | 55 |
| Sell \$/kg L.Wt or C.Wt | \$5.50 | \$5.75 | \$6.00 | \$6.25 |
| Deaths % | 2.0% | 2.0% | 2.0% | 2.0% |
| Months Farmed | 11 | 11 | 11 | 11 |
| Buy/Opening Value | (\$193) | (\$193) | (\$193) | (\$193) |
| Sell/Closing Value | \$303 | \$316 | \$330 | \$344 |
| Velvet | \$7 | \$7 | \$7 | \$7 |
| Costs | | | | |
| Freight | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Animal Health | (\$10.00) | (\$10.00) | (\$10.00) | (\$10.00) |
| Sundry Costs | \$0.00 | \$0.00 | \$0.00 | \$0.00 |
| Deaths | (\$6.05) | (\$6.33) | (\$6.60) | (\$6.88) |
| Interest @ 10% | (\$17.65) | (\$17.65) | (\$17.65) | (\$17.65) |
| Profit \$/hd before Interest | \$100.83 | \$114.30 | \$127.78 | \$141.25 |
| Profit \$/hd after Interest | \$83.18 | \$96.65 | \$110.13 | \$123.60 |
| KgDM Consumed | 799 | 799 | 799 | 799 |
| Profit \$/kg DM Consumed before Inte | 12.62 c | 14.31 c | 15.99 c | 17.68 c |
| Profit \$/kg DM Consumed after Intere | 10.41 c | 12.10 c | 13.78 c | 15.47 c |

GROSS MARGIN - Velvet Stag

| | Velvet Stag | Velvet Stag | Velvet Stag | Velvet Stag |
|--|-----------------|-----------------|-----------------|-----------------|
| Velvet Weight 1st Cut | 2.80 | 3.00 | 3.20 | 3.40 |
| Velvet Weight Regrowth | 0.80 | 0.90 | 1.00 | 1.10 |
| Velvet Price | \$90.00 | \$100.00 | \$120.00 | \$130.00 |
| Velvet Income | \$324.00 | \$390.00 | \$504.00 | \$585.00 |
| Deaths % | 1.0% | 1.0% | 1.0% | 1.0% |
| Months Farmed | 12 | 12 | 12 | 12 |
| Buy/Opening Value | (\$600) | (\$700) | (\$800) | (\$900) |
| Replacement Rate | 15% | 15% | 15% | 15% |
| Replacement Cost | | | | |
| Costs | | | | |
| Velvet Fees | (\$10.00) | (\$10.00) | (\$10.00) | (\$10.00) |
| Animal Health | (\$5.00) | (\$5.00) | (\$5.00) | (\$5.00) |
| Replacement Cost - Margin | \$400.00 | (\$60.00) | (\$60.00) | (\$60.00) |
| Deaths | (\$0.00) | (\$0.00) | (\$0.00) | (\$0.00) |
| Interest @ 10% | (\$60.00) | (\$70.00) | (\$80.00) | (\$90.00) |
| Profit \$/hd before Interest | \$249.15 | \$315.15 | \$429.15 | \$510.15 |
| Profit \$/hd after Interest | \$189.15 | \$245.15 | \$349.15 | \$420.15 |
| KgDM Consumed | 1445 | 1445 | 1445 | 1445 |
| Profit \$/kg DM Consumed before Interest | 17.24 c | 21.81 c | 29.70 c | 35.30 c |
| Profit \$/kg DM Consumed after Interest | 13.09 c | 16.97 c | 24.16 c | 29.08 c |

SHEEP RECONCILIATION & INCOME

OPENING

| | |
|---------------|----|
| | No |
| Breeding Ewes | 75 |
| 2th Ewes | 25 |
| Ewe Hoggets | 28 |
| Rams | 2 |

CLOSING

| | |
|---------------|----|
| | No |
| Breeding Ewes | 75 |
| 2th Ewes | 25 |
| Ewe Hoggets | 28 |
| Rams | 2 |

TOTAL 130

TOTAL 130

PURCHASES

| | No | \$/Hd | \$ |
|------------------------------|-----|----------|--------------|
| Rams | 0.5 | \$600.00 | \$300.00 |
| TOTAL SHEEP PURCHASES | | | <u>\$300</u> |

SALES

| | No | \$/Hd | \$ | Wt. Kg | \$/kg |
|---------------------------|----|---------|----------------|--------|---------|
| Ram Lambs | 68 | \$55.10 | \$3,719 | 29.0 | \$ 1.90 |
| Ewe Lambs | 40 | \$49.95 | \$1,973 | 27.0 | \$ 1.85 |
| Hogget Lambs | 14 | \$45.60 | \$638 | 24.0 | \$ 1.90 |
| Cull Ewes | 20 | \$45.00 | \$900 | | |
| Ewe Hgts/2ths | 1 | \$75.00 | \$106 | | |
| TOTAL SHEEP INCOME | | | <u>\$7,336</u> | | |

BIRTHS

| | |
|--------------------|------------------------|
| | 135% Ewe Lambing |
| | 50% Ewe Hogget Lambing |
| Ram lambs | 68 |
| Ewe Lambs | 68 |
| Hogget Lambs | 14 |
| CHECK TOTAL | <u>280</u> |

DEATHS & MISSING

| | | |
|--------------------|----|------------|
| Ewes | 5% | 5 |
| Hoggets | 3% | 1.6 |
| Others | | 0.50 |
| CHECK TOTAL | | <u>280</u> |

WOOL PRODUCTION & INCOME

| | No SHORN | Kg/hd | \$/KG | TOTAL KG's | TOTAL \$ |
|-------------------|------------|-------|--------|------------|----------------|
| Lambs | 149 | 1.00 | \$3.00 | 149 | \$447 |
| Hoggets | 28 | 2.75 | \$3.00 | 77 | \$231 |
| Ewes (Main Shear) | 100 | 2.75 | \$3.00 | 275 | \$825 |
| Ewes (2nd Shear) | 75 | 2.75 | \$3.00 | 206 | \$619 |
| Two Tooths | 25 | 2.50 | \$3.00 | 63 | \$188 |
| Rams | 2 | 7.00 | \$3.00 | 14 | \$42 |
| Crutchings | | | | | |
| | <u>379</u> | | | <u>784</u> | <u>\$2,351</u> |

WOOL/SSU = 6.32 Kgs

Av.PRICE = \$3.00/Kg

| COMMENTS | PRODUCTION |
|-----------|------------------------------------|
| Lambing % | 135% STS. Ewes 50% STS. Hoggets |
| Wool | 6.32 Kgs/su |
| Deaths % | 5% Ewes 3% Hgts |

STOCK Nos. & VALUE

| | No. | SU's | \$/Hd | \$ |
|---------------|-----|---------|----------|-------------|
| Breeding Ewes | 75 | 1 | \$80.00 | \$6,000 |
| 2th Ewes | 25 | 1 | \$95.00 | \$2,375 |
| Ewe Hoggets | 28 | 0.8 | \$75.00 | \$2,100 |
| Rams | 2 | 0.8 | \$600.00 | \$1,200 |
| | 130 | 124 sus | | \$11,675 |
| | | | | \$94.15 /su |

REVENUE

| | No | \$/Hd | \$ |
|------------------|------------------------|---------------------------|----------------------------|
| SALES | | | |
| Ram Lambs | 68 | \$55.10 | \$3,719 |
| Ewe Lambs | 40 | \$49.95 | \$1,973 |
| Hogget Lambs | 14 | \$45.60 | \$638 |
| Cull Ewes | 20 | \$45.00 | \$900 |
| Ewe Hgts/2ths | 1 | \$75.00 | \$106 |
| | | | \$7,336 |
| WOOL | 124 SUs @ 784 Kgs @ | 6.32 Kgs/su \$3.00 /kg | \$2,351 |
| PURCHASES | Rams | 0.5 \$600.00 | \$300 |
| | | | (\$300) |
| | | GROSS INCOME | \$9,388 \$76.71 /su |

EXPENDITURE

| | | | |
|---------------|----------------------------------|----------------------------|----------------|
| Animal Health | \$2.50 /ssu | | \$310 |
| Shearing | 379 head @ | \$2.25 /hd | \$853 |
| Crutching | head @ | \$0.50 /hd | |
| Freight | Wool 4.4 bales @ Stock head @ | \$8.00 /bale \$0.50 /hd | \$35 |
| | | TOTAL EXPENSES | \$1,198 |

GROSS MARGIN (before Interest) \$8,190 **GROSS MARGIN (after Interest) \$7,023 10 % Interest**

GROSS MARGIN per EWE \$81.90 * **GROSS MARGIN per EWE \$70.23 ***

GROSS MARGIN per SU \$66.05 * **GROSS MARGIN per SU \$56.63 ***

GROSS MARGIN per Kg Dry Matter \$0.104 **GROSS MARGIN per Kg Dry Matter \$0.089**

RETURN on CAPITAL = 70 %

Feed Consumption

| | KgDM/hd/yr | No | Total |
|-------------|------------|-----|--------------|
| Ewe | 633 | 100 | 63255 |
| Rams | 730 | 2 | 1460 |
| Lmbg Hogget | 267 | 25 | 6663 |
| Ewe Lambs | 265 | 28 | 7410 |
| | | | 78788 KgDM |
| | | | 788 KgDM/ewe |
| | | | 635 KgDM/su |

**Venison Imports into Germany
(Tonnes)**

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---------------------|------------------|------------------|-----------------|------------------|------------------|------------------|-----------------|------------------|
| EU -GB | 1,760.20 | 1,416.40 | 992.1 | 912.00 | 1,112.20 | 1,062.80 | 701.10 | 572.10 |
| EU - F | 603.2 | 458.8 | 267.9 | 266.1 | 425.4 | 601.1 | 330.7 | 301.1 |
| EU - E | 1,001.80 | 1,092.80 | 616.8 | 811.7 | 1,090.20 | 821.70 | 693.10 | 721.00 |
| EU -Other | 396.30 | 212.80 | 169.3 | 213.5 | 408.4 | 278.6 | 216 | 206.9 |
| Total | 3,761.50 | 3,180.80 | 2,046.10 | 2,203.30 | 3,036.20 | 2,764.20 | 1,940.90 | 1,801.10 |
| Austria | 623.90 | 608.60 | 173.4 | 309.9 | 364.90 | 385.90 | 152.70 | 119.00 |
| Yugoslavia | 659.10 | 886.90 | 401.3 | 391.7 | 558.6 | 381 | 165.5 | 38.2 |
| Sweden | 141.20 | 9.50 | 0.2 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| Poland | 1,979.00 | 2,029.00 | 1,994.40 | 3,021.80 | 2,145.10 | 2,475.90 | 3,654.40 | 4,363.10 |
| CSSR | 1,230.40 | 1,049.70 | 1,003.30 | 1,199.60 | 1,281.10 | 1,466.70 | 1,082.40 | 1,425.20 |
| Hungary | 1,212.80 | 1,242.00 | 1,075.10 | 1,417.50 | 1,139.70 | 783.90 | 677.70 | 900.00 |
| Rumania | 280.10 | 78.20 | 22.20 | 0.00 | 11.70 | 0.00 | 0.00 | 0.00 |
| South Africa | 505.50 | 870.20 | 450.50 | 485.30 | 726.00 | 249.60 | 46.70 | 108.80 |
| Argentina | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| New Zealand | 691.70 | 1,096.70 | 1,109.90 | 1,127.50 | 1,128.10 | 1,368.10 | 1,494.00 | 3,199.20 |
| Australia | 59.30 | 29.10 | 24.10 | 29.10 | 46.10 | 0.00 | 0.00 | 0.00 |
| Others | 513.70 | 722.60 | 512.30 | 584.80 | 369.60 | 590.30 | 510.20 | 458.30 |
| Total Tonnes | 11,716.80 | 11,803.30 | 8,812.80 | 10,770.50 | 10,807.10 | 10,465.60 | 9,724.50 | 12,413.80 |

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|---------------------|------------------|------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| EU | 0 | 0 | 1265 | 2147 | 1,618 | 1,247 | 1,823 | 1,749 | 3,884 | 5,784 | 2,280 |
| Hungary | 723.6 | 871.4 | 708 | 639 | 952 | 824 | 977 | 923 | 1,078 | 1,175 | 945 |
| Poland | 4,382.80 | 4,366.90 | 3,847 | 3,678 | 3,017 | 2,894 | 3,051 | 2,700 | 2,794 | 1,929 | 2,124 |
| Czechoslovakia | 1,161.80 | 1,215.20 | 987 | 859 | 640 | 719 | 809 | 885 | 1,024 | 909 | 526 |
| Rumanian | 0 | 0 | 0 | 49 | 26 | 11 | 0 | 4 | 13 | 19 | 0 |
| Slovakia | 0 | 0 | 259 | 159 | 160 | 94 | 72 | 73 | 52 | 28 | 66 |
| Slovenian | 0 | 0 | 38 | 0 | 12 | 16 | 0 | 0 | 0 | 0 | 0 |
| Lettland | 0 | 0 | 122 | 63 | 67 | 45 | 28 | 71 | 95 | 68 | 14 |
| New Zealand | 4,983.80 | 5,385.50 | 5551 | 5674 | 5,063 | 6,332 | 8,351 | 7,449 | 7,106 | 8,685 | 7,227 |
| Australian | 61.5 | 133.6 | 117 | 326 | 420 | 213 | 457 | 723 | 799 | 1,638 | 972 |
| South Africa | 119.8 | 165.2 | 78 | 310 | 288 | 281 | 337 | 505 | 720 | 1,286 | 795 |
| China | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 4 | 0 |
| Other | 961.6 | 966.9 | 836 | 996 | 985 | 285 | 266 | 492 | 170 | 251 | 183 |
| Total Tonnes | 12,394.90 | 13,104.70 | 13,808 | 14,900 | 13,248 | 12,941 | 16,171 | 15,575 | 17,742 | 21,767 | 15,132 |

Source: German Statistics Department year ended 30th March

**Wild Boar Imports into Germany
(Tonnes)**

| | 1984 | 1985 | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 | | |
|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|--|
| EU | | | | | | 302.8 | 280.5 | 66.8 | | |
| Yugoslavia | 180.4 | 246.3 | 139.5 | 111.9 | 194.5 | 143.3 | 99.2 | 28.4 | | |
| Poland | 713.2 | 859.2 | 1,021.60 | 1,046.30 | 945.8 | 1,158.60 | 1,838.50 | 1,874.90 | | |
| Hungary | 323.2 | 310.1 | 205.7 | 229 | 348.1 | 353.1 | 203.9 | 177.7 | | |
| Romania | 191 | 158.3 | 19.7 | 0 | 9.1 | 87.5 | 18.6 | 12.2 | | |
| Bulgarian | 96 | 134.7 | 32.9 | 12.9 | 0 | 0 | 0 | 0 | | |
| USSR | 228.5 | 268.1 | 280.8 | 345.7 | 393.5 | 472.8 | 432.9 | 322.2 | | |
| Australia | 1,117.40 | 1,314.90 | 825.8 | 942.9 | 1,027.90 | 1,367.80 | 1,080.10 | 920.80 | | |
| Other | 117.4 | 9.9 | 10.4 | 76.4 | 56.6 | 43.6 | 11.2 | 2.1 | | |
| Total | 2,967.10 | 3,301.50 | 2,536.40 | 2,765.10 | 2,975.20 | 3,939.30 | 3,964.90 | 3,404.20 | | |

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 |
|--------------|-----------------|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| EU | 0 | 0 | 1,484 | 171 | 1,378 | 527 | 290 | 308 | 438 | 602 | 251 |
| Hungary | 282.5 | 471.6 | 271 | 324 | 467 | 503 | 641 | 679 | 784 | 691 | 692 |
| Poland | 1,437.90 | 368.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| CSR | 177.3 | 19.6 | 0 | 0 | 2 | 143 | 112 | 244 | 320 | 278 | 190 |
| Australian | 1,517.80 | 2,209.30 | 1,239 | 1,194 | 1,290 | 1,053 | 981 | 1,780 | 1,552 | 2,132 | 1,742 |
| Other | 271.3 | 77.9 | 90 | 35 | 42 | 68 | 79 | 167 | 43 | 71 | 0 |
| Total | 3,686.80 | 3,146.50 | 3,084 | 1,723 | 3,179 | 2,294 | 2,103 | 3,178 | 3,137 | 3,775 | 3,071 |

Source: German Statistics Department year ended 30th March

Exported Venison Chilled Value (\$NZ)

| June Years | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---------------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| AUSTRALIA | \$223,457 | \$162,046 | \$92,485 | \$117,563 | \$123,384 | \$276,832 | \$459,033 | \$389,173 | \$304,896 |
| AUSTRIA | \$0 | \$0 | \$0 | \$126,051 | \$0 | \$1,057,494 | \$657,311 | \$0 | \$0 |
| BELGIUM | \$600,751 | \$2,928,725 | \$1,578,142 | \$8,766,279 | \$8,111,502 | \$8,639,390 | \$11,236,265 | \$13,877,384 | \$8,580,410 |
| BRAZIL | \$0 | \$0 | \$0 | \$74,280 | \$88,408 | \$0 | \$0 | \$0 | \$0 |
| CANADA | \$451,378 | \$275,893 | \$189,829 | \$683,758 | \$621,619 | \$703,209 | \$1,194,795 | \$1,537,818 | \$1,311,404 |
| DENMARK | \$0 | \$0 | \$13,016 | \$0 | \$43,759 | \$238,966 | \$0 | \$0 | \$0 |
| Faeroe Islands | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,227 | \$2,166 | \$4,391 | \$0 |
| FIJI | \$4,423 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| FINLAND | \$0 | \$0 | \$98,503 | \$0 | \$43,942 | \$0 | \$0 | \$68,263 | \$0 |
| FRANCE | \$1,472,872 | \$1,795,876 | \$1,980,889 | \$1,396,187 | \$1,133,089 | \$2,703,061 | \$3,801,994 | \$3,844,898 | \$1,007,077 |
| FRENCH POLYNESIA | \$38,304 | \$42,536 | \$57,030 | \$30,222 | \$54,973 | \$67,220 | \$44,546 | \$48,492 | \$81,822 |
| GERMANY | \$4,585,716 | \$8,649,750 | \$8,079,018 | \$7,145,045 | \$9,013,237 | \$14,766,630 | \$14,388,440 | \$12,135,795 | \$11,295,504 |
| GREECE | \$0 | \$0 | \$0 | \$0 | \$6,188 | \$0 | \$0 | \$0 | \$0 |
| GUAM | \$0 | \$455 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| HONG KONG | \$10,924 | \$16,352 | \$21,024 | \$201,944 | \$107,555 | \$0 | \$48,090 | \$63,936 | \$29,597 |
| INDONESIA | \$971 | \$0 | \$0 | \$0 | \$100 | \$0 | \$0 | \$0 | \$2,314 |
| IRELAND | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$41,093 |
| ITALY | \$557,568 | \$261,342 | \$84,266 | \$166,803 | \$398,401 | \$891,810 | \$1,987,710 | \$1,003,810 | \$552,173 |
| JAPAN | \$1,032,470 | \$1,312,743 | \$947,603 | \$745,281 | \$647,716 | \$705,820 | \$1,040,339 | \$1,721,537 | \$951,946 |
| KOREA, REPUBLIC | \$87,151 | \$69,442 | \$52,171 | \$39,959 | \$0 | \$67,056 | \$2,000 | \$0 | \$8,248 |
| MEXICO | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$29,645 | \$0 | \$0 |
| NETHERLANDS | \$636,478 | \$1,083,932 | \$1,000,160 | \$1,408,578 | \$1,198,435 | \$3,234,536 | \$2,598,787 | \$4,191,242 | \$1,060,545 |
| NORFOLK ISLAND | \$0 | \$0 | \$0 | \$0 | \$1,923 | \$0 | \$0 | \$0 | \$0 |
| NORWAY | \$0 | \$0 | \$0 | \$0 | \$24,294 | \$0 | \$0 | \$0 | \$0 |
| PAPUA NEW GUINEA | \$0 | \$0 | \$0 | \$2,018 | \$0 | \$0 | \$0 | \$0 | \$0 |
| PHILIPPINES | \$0 | \$413 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| REUNION | \$0 | \$15,012 | \$30,000 | \$5,558 | \$2,749 | \$0 | \$0 | \$0 | \$1,967 |
| SINGAPORE | \$94,452 | \$45,398 | \$149,099 | \$188,846 | \$2,536 | \$169,800 | \$307,614 | \$160,614 | \$403,718 |
| SWEDEN | \$200,596 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$42,010 | \$0 |
| SWITZERLAND | \$483,530 | \$1,883,565 | \$1,727,786 | \$1,592,588 | \$2,070,859 | \$2,518,144 | \$3,448,192 | \$4,510,840 | \$2,672,444 |
| TAIWAN | \$0 | \$28,065 | \$0 | \$0 | \$0 | \$3,797 | \$0 | \$31,641 | \$0 |
| THAILAND | \$0 | \$0 | \$19,171 | \$5,688 | \$7,881 | \$0 | \$0 | \$0 | \$0 |
| UNITED ARAB Emirate | \$0 | \$0 | \$0 | \$7,447 | \$0 | \$0 | \$0 | \$0 | \$0 |
| UNITED KINGDOM | \$797,795 | \$1,142,339 | \$1,396,015 | \$1,080,624 | \$446,415 | \$323,867 | \$752,695 | \$539,708 | \$912,416 |
| USA | \$5,664,881 | \$11,813,732 | \$11,467,229 | \$14,394,633 | \$12,148,623 | \$13,872,576 | \$19,881,086 | \$18,093,405 | \$14,038,257 |
| VENEZUELA | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$16,400 | \$66,127 | \$0 |
| Chilled (NZ) | 16,943,717 | 31,527,616 | 28,983,436 | 38,179,352 | 36,297,588 | 50,242,435 | 61,897,108 | 62,331,084 | 43,255,829 |

Source, DINZ for all Frozen and Chilled Exports, June Years

Exported Venison Chilled Volume kg

| June Years | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| AUSTRALIA | 8,514 | 8,149 | 4,179 | 4,430 | 5,697 | 12,342 | 19,448 | 12,092 | 11,695 |
| AUSTRIA | 0 | 0 | 0 | 12,617 | 0 | 69,708 | 57,084 | 0 | 0 |
| BELGIUM | 33,135 | 132,378 | 48,522 | 587,479 | 547,768 | 543,622 | 544,112 | 604,496 | 468,309 |
| BRAZIL | 0 | 0 | 0 | 2,012 | 3,142 | 0 | 0 | 0 | 0 |
| CANADA | 23,431 | 15,168 | 8,327 | 28,650 | 31,264 | 29,813 | 42,873 | 46,772 | 48,159 |
| DENMARK | 0 | 0 | 601 | 0 | 2,712 | 13,044 | 0 | 0 | 0 |
| Faeroe Islands | 0 | 0 | 0 | 0 | 0 | 403 | 405 | 670 | 0 |
| FIJI | 257 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| FINLAND | 0 | 0 | 5,716 | 0 | 5,300 | 0 | 0 | 16,188 | 0 |
| FRANCE | 142,369 | 136,179 | 128,501 | 137,224 | 145,496 | 208,776 | 242,876 | 192,634 | 95,354 |
| FRENCH POLYNESIA | 1,732 | 2,131 | 2,154 | 978 | 2,713 | 2,898 | 1,660 | 1,711 | 4,208 |
| GERMANY | 308,217 | 454,212 | 354,666 | 411,829 | 729,250 | 1,034,563 | 748,451 | 619,024 | 828,565 |
| GREECE | 0 | 0 | 0 | 0 | 654 | 0 | 0 | 0 | 0 |
| HONG KONG | 731 | 706 | 1,292 | 7,553 | 1,889 | 0 | 1,110 | 943 | 945 |
| INDONESIA | 49 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 50 |
| IRELAND | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,239 |
| ITALY | 82,366 | 14,321 | 4,315 | 12,652 | 33,322 | 68,250 | 187,035 | 68,203 | 32,527 |
| JAPAN | 42,335 | 55,462 | 34,420 | 31,654 | 23,132 | 25,796 | 29,344 | 48,943 | 32,151 |
| KOREA, REPUBLIC | 20,466 | 9,248 | 6,605 | 3,831 | 0 | 2,169 | 50 | 0 | 564 |
| MEXICO | 0 | 0 | 0 | 0 | 0 | 0 | 1,214 | 0 | 0 |
| NETHERLANDS | 29,347 | 45,967 | 40,725 | 83,197 | 72,245 | 152,276 | 93,114 | 139,021 | 48,221 |
| NORFOLK ISLAND | 0 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |
| NORWAY | 0 | 0 | 0 | 0 | 1,012 | 0 | 0 | 0 | 0 |
| PAPUA NEW GUINEA | 0 | 0 | 0 | 125 | 0 | 0 | 0 | 0 | 0 |
| PHILIPPINES | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| REUNION | 0 | 2,487 | 2,000 | 632 | 491 | 0 | 0 | 0 | 172 |
| SINGAPORE | 6,402 | 3,691 | 9,016 | 13,978 | 203 | 10,365 | 16,402 | 10,451 | 34,607 |
| SWEDEN | 22,468 | 0 | 0 | 0 | 0 | 0 | 0 | 1,241 | 0 |
| SWITZERLAND | 20,875 | 84,792 | 45,089 | 77,436 | 112,577 | 131,079 | 148,359 | 146,062 | 112,565 |
| TAIWAN, | 0 | 714 | 0 | 0 | 0 | 1,232 | 0 | 21,094 | 0 |
| THAILAND | 0 | 0 | 504 | 150 | 207 | 0 | 0 | 0 | 0 |
| UNITED KINGDOM | 61,538 | 99,090 | 105,225 | 84,281 | 31,155 | 27,901 | 38,256 | 14,944 | 57,370 |
| USA | 289,890 | 537,397 | 453,697 | 596,622 | 514,555 | 534,700 | 628,839 | 549,952 | 519,608 |
| Venezuela | 0 | 0 | 0 | 0 | 0 | 0 | 700 | 3,521 | 0 |
| Venison Chilled (Kg) | 1,094,122 | 1,602,130 | 1,255,554 | 2,097,711 | 2,264,854 | 2,868,937 | 2,801,332 | 2,497,962 | 2,297,309 |

Source, DINZ for all Frozen and Chilled Exports, June Years

**Export Venison Frozen Value
(\$NZ)**

| June Years | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| AUSTRALIA | \$462,909 | \$104,005 | \$2,181 | \$219,923 | \$957,004 | \$432,728 | \$560,761 | \$276,657 | \$396,535 |
| AUSTRIA | \$3,049,249 | \$2,473,249 | \$1,540,872 | \$129,138 | \$313,989 | \$900,939 | \$6,096,602 | \$5,543,551 | \$4,772,406 |
| BAHRAIN | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$3,695 | \$0 | \$0 |
| BELGIUM | \$4,640,024 | \$7,043,171 | \$6,464,244 | \$10,436,277 | \$12,641,975 | \$7,632,611 | \$7,361,600 | \$15,116,704 | \$9,131,351 |
| BERMUDA | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$5,167 | \$5,233 | \$0 |
| BRAZIL | \$0 | \$0 | \$0 | \$0 | \$1,512 | \$0 | \$0 | \$0 | \$0 |
| CANADA | \$220,264 | \$171,238 | \$254,958 | \$221,256 | \$252,920 | \$131,656 | \$278,956 | \$234,908 | \$50,486 |
| CHINA | \$63,048 | \$64,369 | \$0 | \$0 | \$0 | \$3,190 | \$12,972 | \$0 | \$1,658 |
| COOK ISLANDS | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$36,120 |
| CROATIA | \$105,332 | \$0 | \$95,149 | \$8,482 | \$0 | \$0 | \$0 | \$0 | \$0 |
| CYPRUS | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$9,716 | \$20,186 | \$0 |
| DENMARK | \$2,277,586 | \$4,372,711 | \$2,416,219 | \$2,211,895 | \$2,016,090 | \$1,718,771 | \$3,720,409 | \$3,367,991 | \$1,061,942 |
| Faeroe Islands | \$0 | \$0 | \$0 | \$0 | \$1,239 | \$0 | \$0 | \$0 | \$18,847 |
| FIJI | \$2,844 | \$1,654 | \$3,940 | \$0 | \$0 | \$0 | \$0 | \$1,152 | \$2,980 |
| FINLAND | \$117,987 | \$413,698 | \$155,237 | \$417,697 | \$172,213 | \$1,210,133 | \$1,292,559 | \$960,999 | \$768,424 |
| FRANCE | \$7,331,309 | \$9,466,608 | \$9,301,562 | \$6,839,724 | \$6,191,668 | \$11,151,917 | \$17,440,680 | \$7,652,580 | \$9,739,928 |
| FRENCH POLYNESIA | \$19,279 | \$16,097 | \$26,255 | \$37,506 | \$28,590 | \$22,913 | \$34,833 | \$31,334 | \$55,942 |
| GERMANY | \$29,236,511 | \$54,737,688 | \$55,221,943 | \$55,225,410 | \$56,147,460 | \$54,883,010 | \$89,511,786 | \$84,196,858 | \$52,673,335 |
| GUADELOUPE | \$973 | \$2,485 | \$546 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| HONG KONG | \$308,893 | \$576,678 | \$1,214,953 | \$2,247,431 | \$612,908 | \$346,870 | \$247,938 | \$466,089 | \$506,801 |
| HUNGARY | \$0 | \$0 | \$0 | \$0 | \$0 | \$154,317 | \$0 | \$0 | \$0 |
| ITALY | \$1,736,181 | \$2,148,714 | \$3,739,457 | \$2,821,985 | \$1,385,133 | \$1,592,180 | \$5,465,327 | \$5,354,213 | \$3,993,126 |
| Jamaica | \$0 | \$0 | \$0 | \$0 | \$200 | \$0 | \$0 | \$0 | \$0 |
| JAPAN | \$1,874,797 | \$1,776,900 | \$2,337,078 | \$2,068,689 | \$2,083,905 | \$2,613,455 | \$1,833,519 | \$1,979,327 | \$1,816,676 |
| KOREA, REPUBLIC | \$51,362 | \$219,606 | \$129,564 | \$51,059 | \$3,549 | \$61,118 | \$65,169 | \$24,932 | \$3,340 |
| MALAYSIA | \$0 | \$8,990 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| MALTA | \$281 | \$0 | \$0 | \$0 | \$15,858 | \$55,861 | \$17,485 | \$1,648 | \$9,880 |
| MARTINIQUE | \$0 | \$0 | \$235 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| MEXICO | \$58,241 | \$0 | \$0 | \$74,433 | \$174,768 | \$101,311 | \$222,107 | \$230,892 | \$176,475 |
| NETHERLANDS | \$1,543,422 | \$3,943,252 | \$5,142,802 | \$9,206,173 | \$2,578,402 | \$5,110,257 | \$5,646,400 | \$6,031,023 | \$7,368,610 |
| NEW CALEDONIA | \$0 | \$0 | \$0 | \$0 | \$59,721 | \$21,386 | \$0 | \$0 | \$0 |
| NORWAY | \$648,689 | \$556,501 | \$749,687 | \$408,740 | \$435,449 | \$568,683 | \$337,722 | \$389,769 | \$356,046 |
| PAPUA NEW GUINEA | \$0 | \$0 | \$0 | \$697 | \$0 | \$3,278 | \$0 | \$807 | \$0 |
| PHILIPPINES | \$0 | \$0 | \$29,369 | \$0 | \$0 | \$0 | \$394 | \$0 | \$0 |
| REUNION | \$41,239 | \$62,816 | \$163,795 | \$16,314 | \$84,694 | \$252,564 | \$327,440 | \$405,141 | \$433,977 |
| RUSSIA | \$0 | \$0 | \$0 | \$221,966 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SAMOA | \$0 | \$2,666 | \$1,022 | \$3,779 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SAUDI ARABIA | \$0 | \$0 | \$0 | \$2,768 | \$0 | \$0 | \$0 | \$0 | \$0 |
| SINGAPORE | \$371,773 | \$1,024,033 | \$1,141,677 | \$2,362,599 | \$691,682 | \$936,678 | \$1,456,193 | \$1,309,312 | \$1,153,690 |
| SWEDEN | \$7,756,842 | \$9,461,386 | \$6,295,057 | \$4,996,513 | \$6,464,137 | \$5,765,320 | \$8,480,230 | \$6,317,729 | \$7,941,580 |
| SWITZERLAND | \$6,676,195 | \$9,187,320 | \$7,240,033 | \$4,050,143 | \$1,380,973 | \$6,141,612 | \$10,843,217 | \$6,052,867 | \$6,059,619 |
| TAIWAN | \$105,718 | \$63,912 | \$35,083 | \$42,183 | \$51,733 | \$27,899 | \$12,445 | \$66,315 | \$113,171 |
| THAILAND | \$0 | \$0 | \$15,705 | \$13,201 | \$6,153 | \$2,751 | \$0 | \$7,198 | \$14,068 |
| TONGA | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$34,261 |
| UK | \$475,936 | \$957,675 | \$940,773 | \$2,254,007 | \$1,418,635 | \$912,700 | \$798,720 | \$1,172,028 | \$1,444,594 |
| USA | \$2,776,980 | \$4,314,936 | \$3,683,978 | \$4,057,673 | \$5,566,057 | \$4,382,556 | \$6,118,154 | \$5,253,073 | \$4,719,209 |
| VANUATU | \$213 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| Venezuela | \$0 | \$0 | \$0 | \$0 | \$0 | \$2,643 | \$14,230 | \$0 | \$0 |
| Wallis and Futuna | \$ | \$0 | \$0 | \$0 | \$0 | \$1,012 | \$2,121 | \$0 | \$0 |

Export Venison Frozen Volume kg

| June Years | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---------------------------|-----------|------------|------------|------------|------------|------------|------------|------------|------------|
| AUSTRALIA | 142,440 | 32,409 | 90 | 39,993 | 213,925 | 169,275 | 166,908 | 56,898 | 103,293 |
| AUSTRIA | 348,633 | 226,460 | 131,801 | 13,026 | 75,753 | 145,101 | 518,190 | 574,466 | 753,809 |
| BELGIUM | 396,973 | 477,756 | 455,833 | 1,095,868 | 1,327,641 | 752,843 | 551,177 | 1,220,623 | 690,719 |
| BERMUDA | 0 | 0 | 0 | 0 | 0 | 0 | 174 | 125 | 0 |
| BRAZIL | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 |
| CANADA | 13,351 | 8,252 | 18,895 | 14,766 | 10,349 | 6,146 | 78,276 | 8,107 | 4,468 |
| CHINA, | 2,559 | 1,615 | 0 | 0 | 0 | 163 | 5,032 | 0 | 408 |
| COOK ISLANDS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,523 |
| CROATIA | 13,086 | 0 | 14,768 | 1,719 | 0 | 0 | 0 | 0 | 0 |
| CYPRUS | 0 | 0 | 0 | 0 | 0 | 0 | 1,003 | 1,999 | 0 |
| DENMARK | 175,700 | 312,582 | 145,852 | 172,053 | 167,493 | 105,244 | 178,388 | 207,121 | 61,604 |
| Faeroe Islands | 0 | 0 | 0 | 0 | 1,009 | 0 | 0 | 0 | 823 |
| FIJI | 198 | 73 | 101 | 0 | 0 | 0 | 0 | 389 | 184 |
| FINLAND | 8,829 | 36,302 | 15,460 | 62,682 | 77,044 | 298,281 | 357,475 | 216,059 | 179,409 |
| FRANCE | 847,892 | 998,928 | 1,010,324 | 863,132 | 1,051,844 | 1,336,087 | 1,510,843 | 540,656 | 1,333,456 |
| FRENCH POLYNESIA | 905 | 464 | 916 | 2,648 | 1,583 | 1,645 | 1,930 | 1,066 | 2,987 |
| GERMANY | 3,514,573 | 5,409,023 | 5,599,584 | 7,514,296 | 8,087,913 | 6,814,929 | 7,967,223 | 7,717,877 | 6,882,998 |
| GUADELOUPE | 155 | 202 | 101 | 0 | 0 | 0 | 0 | 0 | 0 |
| HONG KONG | 19,692 | 25,133 | 50,493 | 83,785 | 32,566 | 25,295 | 23,867 | 50,681 | 25,309 |
| HUNGARY | 0 | 0 | 0 | 0 | 0 | 20,434 | 0 | 0 | 0 |
| ITALY | 240,763 | 202,935 | 300,100 | 294,465 | 186,184 | 236,792 | 518,875 | 458,142 | 512,929 |
| Jamaica | 0 | 0 | 0 | 0 | 48 | 0 | 0 | 0 | 0 |
| JAPAN | 80,797 | 91,444 | 99,760 | 134,085 | 89,108 | 97,615 | 68,061 | 62,809 | 64,653 |
| KOREA, REPUBLIC | 3,011 | 22,277 | 20,652 | 11,316 | 96 | 7,144 | 18,539 | 272 | 3,021 |
| MALAYSIA | 0 | 894 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| MALTA | 25 | 0 | 0 | 0 | 625 | 1,824 | 1,223 | 46 | 314 |
| MARTINIQUE | 0 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 |
| MEXICO | 2,829 | 0 | 0 | 3,642 | 8,005 | 5,820 | 8,922 | 9,354 | 9,146 |
| NETHERLANDS | 180,836 | 312,228 | 413,256 | 1,073,070 | 367,490 | 516,297 | 382,258 | 483,123 | 513,980 |
| NEW CALEDONIA | 0 | 0 | 0 | 0 | 18,161 | 6,541 | 0 | 0 | 0 |
| NORFOLK ISLAND | 0 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 |
| NORWAY | 43,965 | 27,521 | 39,461 | 50,393 | 28,331 | 28,875 | 11,635 | 15,084 | 14,163 |
| PAPUA NEW GUINEA | 0 | 0 | 0 | 125 | 0 | 2,000 | 0 | 96 | 0 |
| PHILIPPINES | 0 | 0 | 1,194 | 0 | 0 | 0 | 13 | 0 | 0 |
| REUNION | 10,026 | 5,868 | 14,998 | 3,509 | 28,706 | 64,129 | 60,984 | 57,544 | 77,036 |
| RUSSIA | 0 | 0 | 0 | 30,234 | 0 | 0 | 0 | 0 | 0 |
| SAMOA | 0 | 74 | 25 | 99 | 0 | 0 | 0 | 0 | 0 |
| SAUDI ARABIA | 0 | 0 | 0 | 1,538 | 0 | 0 | 0 | 0 | 0 |
| SINGAPORE | 25,229 | 62,764 | 70,943 | 243,695 | 52,438 | 73,357 | 84,749 | 79,370 | 78,810 |
| SWEDEN | 1,290,039 | 1,321,005 | 709,692 | 786,891 | 876,761 | 1,006,402 | 912,429 | 765,421 | 1,276,058 |
| SWITZERLAND | 684,155 | 804,429 | 660,146 | 391,685 | 129,902 | 533,737 | 711,909 | 401,089 | 600,912 |
| TAIWAN | 32,147 | 9,867 | 12,462 | 4,278 | 14,340 | 12,589 | 14,657 | 37,875 | 35,326 |
| THAILAND | 0 | 0 | 412 | 346 | 206 | 106 | 0 | 205 | 2,208 |
| TONGA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18,224 |
| UNITED ARAB Emirate | 0 | 0 | 0 | 0 | 0 | 0 | 15,000 | 0 | 0 |
| UNITED KINGDOM | 84,556 | 222,222 | 122,374 | 326,602 | 299,995 | 122,119 | 111,941 | 166,212 | 227,183 |
| USA | 272,677 | 357,815 | 296,313 | 365,894 | 437,657 | 433,158 | 649,261 | 411,682 | 432,538 |
| Venezuela | 0 | 0 | 0 | 0 | 0 | 128 | 1,008 | 0 | 0 |
| Wallis and Futuna Islands | 0 | 0 | 0 | 0 | 0 | 88 | 163 | 0 | 0 |
| Frozen (Kg) | 8,436,050 | 10,970,542 | 10,206,056 | 13,585,835 | 13,585,223 | 12,824,164 | 14,932,518 | 13,544,391 | 13,924,491 |

Source, DINZ for all Frozen and Chilled Exports, June Years

NEW ZEALAND DEER INDUSTRY STATISTICS AND FORECASTS (June Years)

Source: Actual numbers & exports - Statistics NZ

Kill numbers & actual velvet production- GIB

(E No) Estimated Numbers -

MAF Policy estimated deer numbers using a Biological Model, other information actual historical information

(E) Estimates – MAF Policy estimates

SNZ = Statistics New Zealand

DEER NUMBERS

| YEAR ENDING 30 JUNE | Source of info SNZ FARMS | SNZ | MAF | SNZ | MAF | SNZ | MAF |
|---------------------------|--------------------------------|--------------------------|--------------------------|---------------------------|---------------------------|-------------------------|-------------------------|
| | | Actual | Estimated | ACTUAL | ESTIMATED | ACTUAL | ESTIMATED |
| | | NO'S (000'S) TOTAL | NO'S (000'S) TOTAL | NO'S (000'S) FEMALE | NO'S (000'S) FEMALE | NO'S (000'S) MALE | NO'S (000'S) MALE |
| 1980 | | 104.359 | 104.359 | 64.70258 | 64.703 | 39.65642 | 39.656 |
| 1981 | | 109.158 | 109.158 | 67.67796 | 67.678 | 41.48004 | 41.48 |
| 1982 | 1654 | 151.02 | 151.02 | 93.6324 | 93.632 | 57.3876 | 57.388 |
| 1983 | 2102 | 195.653 | 195.653 | 121.272 | 121.272 | 74.381 | 74.381 |
| 1984 | 2539 | 258.707 | 258.707 | 162.895 | 162.895 | 95.812 | 95.812 |
| 1985 | 3041 | 319.908 | 319.908 | 212.054 | 212.054 | 107.854 | 119.76228 |
| 1986 | 3995 | 392.154 | 407.8129 | 264.066 | 264.066 | 128.088 | 143.7468537 |
| 1987 | 4316 | 500.397 | 500.6657 | 337.657 | 337.657 | 162.65 | 163.0087173 |
| 1988 | 4625 | 606.042 | 646.9879 | 411.927 | 465.1414789 | 194.115 | 181.8464571 |
| 1989 | 4833 | 780.066 | 830.7661 | 521.15 | 584.53828 | 258.913 | 246.2277866 |
| 1990 | - | 976.29 | 1031.099 | 636.454 | 691.361189 | 339.836 | 339.7379996 |
| 1991 | 5340 | 1129.503 | 1220.368 | 0 | 795.5510326 | 0 | 424.8166537 |
| 1992 | 5123 | 1135.242 | 1335.652 | 678.199 | 826.8023013 | 457.043 | 508.8493456 |
| 1993 | 5095 | 1078.685 | 1235.104 | 649.239 | 770.1968122 | 429.24 | 464.9068545 |
| 1994(E No) | 5306 | 1231.109 | 1276.023 | 751.375 | 810.1918179 | 473.274 | 465.8308501 |
| 1995(E No) | 5019 | 1164.554 | 1222.884 | 710.155 | 750.6945229 | 454.399 | 472.1894029 |
| 1996(E No) | 4377 | 1192.138 | 1206.218 | 707.428 | 750.9416545 | 484.71 | 455.2768169 |
| 1997(E No) | | | 1327.435 | | 852.4484488 | | 474.9862601 |
| 1998(E No) | | | 1385.719 | | 937.6310428 | | 448.0877421 |
| 1999(E No.) | 4427 | 1676.788 | 1412.656 | 1160.6 | 993.5519175 | 516.188 | 419.1045351 |
| 2000(E) | | | 1493.163 | | 1049.225467 | | 443.937809 |
| 2001(E) | | | 1551.25 | | 1096.404753 | | 454.8456111 |
| 2002(E) | | 1659.326 | 1659.32 | 1174.641 | 1174.697357 | 484.685 | 484.6227816 |
| 2003(E) | | | 1729.172 | | 1226.777359 | | 502.3949498 |
| 2004(E) | | | 1796.795 | | 1294.690516 | | 502.1041386 |
| 2005(E) | | | 1886.664 | | 1365.097711 | | 521.5665224 |
| 2006(E) | | | 1962.225 | | 1425.595346 | | 536.6293154 |

PRODUCTION: Venison

| YEAR ENDING 30 JUNE | GIB | GIB | GIB | GIB | VENISON (FARMED) TONNES | FERAL TONNES | TOTAL TONNES | VENISON | SCHEDULE |
|---------------------------|-----------------------|-------------------------|------------------------|----------|-------------------------------|-----------------|-----------------|-------------------------------------|---------------------------------------|
| | NO. KILLED MALE | NO. KILLED FEMALE | NO. KILLED TOTAL | VENISON | | | | AP2 STAG \$/KG (NET GIB LEVY) | 45/kg HIND \$/KG (NET GIB LEVY) |
| 1980 | 0 | 0 | 0 | | | | | 2.50 | 1.70 |
| 1981 | 12540 | 0 | 12540 | 689.7 | | | | 3.00 | 2.04 |
| 1982 | 13498 | 0 | 13498 | 742.39 | | | | 5.00 | 3.40 |
| 1983 | 18209 | 0 | 18209 | 1001.49 | | | | 6.00 | 4.08 |
| 1984 | 22314 | 0 | 22314 | 1227.27 | | | | 6.50 | 4.42 |
| 1985 | 28714 | 0 | 28714 | 1579.27 | 828 | 2407.27 | | 5.50 | 3.74 |
| 1986 | 37000 | 74 | 37074 | 2075.472 | 594 | 2669.472 | | 5.40 | 3.67 |
| 1987 | 56904 | 347 | 57251 | 3200 | 681 | 3881 | | 5.50 | 3.74 |
| 1988 | 80764 | 1274 | 82038 | 4497 | 760 | 5257 | | 5.44 | 3.70 |
| 1989 | 75940 | 7073 | 83013 | 4211.36 | 1005.489 | 5216.849 | | 5.96 | 4.00 |
| 1990 | 70236 | 30481 | 100717 | 4959 | 1230 | 6189 | | 6.29 | 4.29 |
| 1991 | 107527 | 70196 | 177723 | 8975 | 832 | 9807 | | 4.71 | 3.19 |
| 1992 | 124188 | 157179 | 281367 | 14085 | 569 | 14654 | | 4.23 | 2.69 |
| 1993 | 224967 | 220740 | 445707 | 22249.84 | 936 | 23185.84 | | 5.56 | 4.56 |
| 1994(E No) | 195592 | 143101 | 338693 | 17841.74 | 723 | 18564.74 | | 4.64 | 4.10 |
| 1995(E No) | 191476 | 237883 | 429359 | 21335.89 | 780 | 22115.89 | | 5.04 | 4.47 |
| 1996(E No) | 176428 | 146787 | 323215 | 16744.78 | 1297 | 18041.78 | | 6.78 | 6.18 |
| 1997(E No) | 192695 | 88859 | 281554 | 16078.8 | 1515 | 17593.8 | | 6.98 | 6.65 |
| 1998(E No) | 259682 | 126566 | 386248 | 22580.97 | 930.2537 | 23511.23 | | 5.37 | 4.73 |
| 1999(E No.) | 285081 | 168765 | 453846 | 25685.72 | 698 | 26383.72 | | 4.85 | 4.29 |
| 2000(E) | 236284 | 177564 | 413848 | 22306.53 | 797 | 23103.53 | | 6.08 | 5.98 |
| 2001(E) | 280816 | 203002 | 483818 | 26430.99 | 1109 | 27539.99 | | 7.42 | 6.92 |
| 2002(E) | 266034 | 175791 | 441825 | 24390.31 | 996 | 25386.31 | | 8.06 | 7.25 |
| 2003(E) | 297182 | 230574 | 527756 | 27717.89 | 600 | 28317.89 | | 4.59 | 4.29 |
| 2004(E) | 320791.3 | 224380.9 | 545172.1 | 29824.94 | 700 | 30524.94 | | 6.03 | 5.64 |
| 2005(E) | 322686.7 | 241022.7 | 563709.4 | 30766.96 | 750 | 31516.96 | | 6.31 | 5.90 |
| 2006(E) | 344763.9 | 266708.7 | 611472.6 | 33331.74 | 700 | 34031.74 | | 6.89 | 6.44 |

| PRODUCTION:Velvet | | | | | |
|---------------------------|---------------------------------------|---|--|---|--|
| YEAR ENDING 30 JUNE | ESTIMATED QUANTITY VELVET KG | GIB ACTUAL PRODUCTION VELVET KG | GIB VELVET PRICE A GRADE \$/KG | GIB VELVET PRICE WEIGHTED \$/KG | SNZ VELVET TOTAL FOB \$ MILL |
| 1980 | 18985.15478 | | 260 | 129 | 2.641 |
| 1981 | 38714.27962 | | 120 | 50 | 3.997 |
| 1982 | 37801.36565 | 37795 | 115 | 38 | 3.82 |
| 1983 | 34600.13241 | 40901 | 115 | 59 | 6.778 |
| 1984 | 44446.38683 | 52248 | 115 | 68 | 4.659 |
| 1985 | 48627.98804 | 57056 | 116 | 73 | 9.76 |
| 1986 | 43999.81075 | 52795 | 116 | 67 | 8.084 |
| 1987 | 76926.91962 | 76906 | 117 | 67 | 10.506 |
| 1988 | 108738.8081 | 110329 | 168 | 153 | 11.728 |
| 1989 | 144422.4255 | 144060 | 228 | 200 | 24.702699 |
| 1990 | 274515.4598 | 274000 | 255 | 160 | 42.943364 |
| 1991 | 305929.1129 | 305000 | 160 | 92 | 49.237605 |
| 1992 | 416682.7771 | 416000 | 180 | 130 | 60.035929 |
| 1993 | 450056.3949 | 450000 | 135 | 95 | 44.530151 |
| 1994(E No) | 496433.3682 | 496000 | 140 | 100 | 58.990998 |
| 1995(E No) | 558328.7244 | 558000 | 160.05 | 124.13 | 51.929349 |
| 1996(E No) | 597444.046 | 597000 | 134.87 | 107.77 | 59.907164 |
| 1997(E No) | 592617.9955 | 592000 | 98.1 | 77.71 | 48.139644 |
| 1998(E No) | 550094.0423 | 550000 | 59.51 | 41.4 | 25.969965 |
| 1999(E No.) | 455133.3011 | 455000 | 80 | 45.59 | 25.935345 |
| 2000(E) | 450492.8195 | 450000 | 155 | 114 | 33.407999 |
| 2001(E) | 495613.9145 | | 110.768 | 79.12 | 34.444376 |
| 2002(E) | 522536.0576 | | 116.4 | 96 | 37.707684 |
| 2003(E) | 522700.8158 | | 110 | 95 | 37.7539343 |
| 2004(E) | 541625.0569 | | 104.2105263 | 90 | 37.0671103 |
| 2005(E) | 505896.3404 | | 101.8947368 | 88 | 35.2647299 |
| 2006(E) | 485055.9824 | | 98.42105263 | 85 | 32.6582625 |

EXPORTS & LOCAL MARKET SALES

| YEAR ENDING 30 JUNE | VENISON (12) Estimated LOCAL MARKET tonnes | VENISON *** Boned out Yeild % | VENISON SNZ ACTUAL VENISON TONNES | VENISON SNZ FOB \$/MILL | VENISON SNZ Total fob Real 1991 \$ | VENISON SNZ Schedule as a % fob | VENISON (10) SNZ AVERAGE \$/KG |
|---------------------------|---|--|---|----------------------------------|--|---|--|
| 1980 | 200 | | 1063 | 5.85 | 0 | | 5.503293 |
| 1981 | 200 | | 2142 | 11.2 | 0 | | 5.228758 |
| 1982 | 200 | | 1307 | 6.73 | 0 | | 5.149197 |
| 1983 | 200 | | 1590 | 8.58 | 0 | | 5.396226 |
| 1984 | 200 | | 1378 | 9.72 | 0 | | 7.053701 |
| 1985 | 200 | | 1876 | 18.18 | 0 | | 9.690832 |
| 1986 | 350 | | 2238 | 20.93 | 0 | | 9.3521 |
| 1987 | 350 | | 2809 | 24.67 | 0 | | 8.782485 |
| 1988 | 350 | | 4011 | 32.31 | 0 | | 8.055348 |
| 1989 | 350 | | 3789.342 | 38.1306 | 0 | | 10.06259 |
| 1990 | 500 | | 3600 | 39.53021 | 0 | | 10.98061 |
| 1991 | 500 | | 5859.516 | 53.22548 | 0 | | 9.083596 |
| 1992 | 500 | | 10111.12 | 81.26846 | 0 | | 8.03753 |
| 1993 | 300 | | 13506.62 | 129.7784 | 0 | | 9.60851 |
| 1994(E No) | 300 | | 14797.11 | 123.526 | 0 | | 8.347981 |
| 1995(E No) | 350 | | 14900 | 138.1286 | 0 | | 9.270377 |
| 1996(E No) | 375 | | 12501.39 | 143.2362 | 0 | | 11.45763 |
| 1997(E No) | 375 | | 11436.33 | 136.7764 | 0 | | 11.95981 |
| 1998(E No) | 500 | | 14573.32 | 137.6679 | 0 | | 9.446567 |
| 1999(E No.) | 520 | | 15846.3 | 137.9677 | 0 | | 8.706619 |
| 2000(E) | 530 | | 15701.47 | 157.4979 | 0 | | 10.03077 |
| 2001(E) | 540 | | 17733.3 | 230.1641 | 0 | | 12.9792 |
| 2002(E) | 567 | | 16058.68 | 214.608 | 0 | | 13.36399 |
| 2003(E) | 595.35 | | 19138.29 | 181.8138 | 0 | | 9.5 |
| 2004(E) | 625.1175 | | 21380.27 | 237.321 | 0 | | 11.1 |
| 2005(E) | 656.3734 | | 22021.22 | 242.4537 | 0 | | 11.01 |
| 2006(E) | 689.192 | | 23014.7 | 275.9462 | 0 | | 11.99 |

| YEAR ENDING 30 JUNE | TOTAL SKINS/ HIDES F.O.B \$ mill | LIVE EXPORTS \$ MILL | Co-PROD (other than Skins/hides) \$ MILL | TOTAL SKINS/ HIDES F.O.B \$ mill |
|---------------------------|--|----------------------------|---|--|
| 1980 | 0.333 | 0 | 0 | 0.333 |
| 1981 | 0.379 | 0 | 0 | 0.379 |
| 1982 | 0.5843 | 0 | 0 | 0.5843 |
| 1983 | 0.5523 | 0 | 0 | 0.5523 |
| 1984 | 0.6579 | 0 | 0 | 0.6579 |
| 1985 | 0.5494 | 0 | 0 | 0.5494 |
| 1986 | 1.2217 | 0 | 0 | 1.2217 |
| 1987 | 1.4118 | 0 | 0 | 1.4118 |
| 1988 | 1.339 | 0 | 0 | 1.339 |
| 1989 | 1.575771 | 3.772261 | 0 | 1.575771 |
| 1990 | 2.237552 | 21.61766 | 0 | 2.237552 |
| 1991 | 3.145745 | 6.008417 | 0 | 3.145745 |
| 1992 | 5.193373 | 3.744199 | 0 | 5.193373 |
| 1993 | 10.545 | 1.525 | 0 | 10.545 |
| 1994(E No) | 11.04112 | 0.1701 | 0 | 11.04112 |
| 1995(E No) | 12.9231 | 0.5775 | 8.70334 | 12.9231 |
| 1996(E No) | 14.88448 | 0.01816 | 10.27077 | 14.88448 |
| 1997(E No) | 13.14774 | 0 | 8.034806 | 13.14774 |
| 1998(E No) | 13.13263 | 0.190377 | 7.796555 | 13.13263 |
| 1999(E No.) | 11.02601 | 0.015527 | 12.50805 | 11.02601 |
| 2000(E) | 10.93099 | 0.060114 | 12.98015 | 10.93099 |
| 2001(E) | 15.8897 | 0.081765 | 13.58772 | 15.8897 |
| 2002(E) | 16.21848 | 0 | 9.318467 | 16.21848 |
| 2003(E) | 17.24867 | 0.02955 | 10.97543 | 17.24867 |
| 2004(E) | 18.14801 | 0.030141 | 11.04063 | 18.14801 |
| 2005(E) | 19.14039 | 0.030744 | 12.89714 | 19.14039 |
| 2006(E) | 21.1774 | 0.031359 | 14.98001 | 21.1774 |

Sources:

Actual Numbers & Exports; Statistics NZ

Estimated Numbers; MAFPolicy

Actual Kill; Game Industry Board from 1991/92

Estimated Kill; MAFPolicy

Compiled by MAFPolicy

1999 number of deer farmers MWBES

Acknowledgements

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