

## VELVET - THE WORLD SCENE

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### 1. Production

Twenty years ago New Zealand had only just passed legislation to legalise Deer Farming. Deer numbers on farms were very low. Who in their right mind would ever have predicted that by 1989 New Zealand would be the world's largest exporter of antler velvet for the oriental medicine market.

Not only did we have to capture, relocate, domesticate and farm these animals, but we had to become accepted as a producer and processor of a product that according to custom could only originate in China or Russia. The ancient manuscripts of oriental medicine described this in detail before New Zealand was heard of.

To put velvet into the NZ Deer Industry perspective, some facts need to be stated that will astound many. A proportion of frozen velvet is exported, but for simplicity the end result does not alter greatly when I refer to it all as dried velvet.

1987/88 saw our farms producing 130 tonnes of frozen velvet giving 43 tonnes of dried velvet for an export value of \$25m. Venison exports were \$32m in the same period. In 1988/89 we produced 170 tonnes giving 56 tonnes of dried velvet for an export value of \$43m. The velvet levy collected confirms this quantity within 8%, and knowing that cash was paid to producers by some buyers, this 170 tonne figure is accurate.

Venison exports for the 1988/89 period are estimated at \$34m. This coming season will see 200 tonnes of frozen antler giving 73 tonnes of dried product. I will not and cannot predict the export value. These figures will astound many but they are true and can be substantiated. Some farms alone have grossed up to \$0.5m for velvet sales in a frozen state.

The top quality velvet produced in the world comes from Russia and China where they farm the Siberian Elk, the Maral, the Horse Deer, and Spotted Deer. The top velvetting stags each cut between 8-10 kilograms of velvet. Visually this velvet looks overgrown through to what we would call 'B' or 'C' grade. The difference lies in the structure. Calcification has not occurred. I believe the reason for this is the breed and the breeding of the deer coupled with the feed and climatic conditions. The other major factor is blood retention. The way the deer are yarded, handled in the crush and velvetted without the use of pain killing drugs leave the antler full of blood.

For NZ Deer Farmers to receive the maximum return from velvet production they must aim for:

- (1) Thickness of beam
- (2) Cutting at the Super 'A' or 'A' grade stage of growth
- (3) Retention of blood
- (4) Quality of freezing.

The thickness of beam comes from breeding, selection, and feeding. Most farmers have this in hand.

Cutting at the correct stage of growth has vastly improved. This has been helped by the price for regrowth. Farmers are not so concerned at cutting early.

Retention of Blood: We cannot and should not velvet as they do in China and Russia without the use of pain killing drugs. However, with our company being producer, processor and exporter we know the importance of blood retention. If the market requires this and pays the premium it is logical that we make endeavour to supply.

At Criffel we have carried out research into how we retain blood and have proved by turning the head before cutting and not drugging so many at one time we can better achieve our aim. We use no crush and a "Fentaz"/"Rompun" drug combination. As a contrast Invermay use a crush and just Novacaine drug to deaden the nerves. This method is the closest to Russia or China.

A simple test for blood retention is that immediately after cutting, the antler is turned upside down, the bulb is then gently squeezed and blood should flow from the section of the cut. If it does not flow then the velvet cutting operation has been incorrectly handled assuming that the velvet has been cut at the correct stage of growth.

Every New Zealand processor I have contacted has noticed that over the last three years a higher proportion of velvet purchased frozen, contains less blood. It is the way it is handled on farm.

Its all very basic, where else do you get paid in excess of \$200 per kilogram for blood. The more you can retain in the velvet antler the greater your financial return.

Any attempt to add blood after cutting is totally unacceptable. That practice ruined the industry in 1983/84 and was publicly exposed in Korea. Consumption dropped by over 60% after it was confirmed that chicken blood, pigs blood and substitutes, were added to velvet that lacked blood and/or was not correctly processed.

Quality of Freezing: The majority of velvet arriving at the processing factories is substandard. Chest freezers are designed to receive and hold frozen foods. They are not designed to receive large quantities of fresh product and freeze it quickly and efficiently which is essential to produce a top quality end product. Velvet is a highly perishable product and any damage to the velvet prior to or during freezing seriously reduces its quality.

## 2. Processing

New Zealand velvet was being processed long before deer farming commenced. Bill Bong of Ha Lung Hong purchased nearly all velvet from the feral venison shooting days. It was exported frozen and secretly dried in Hong Kong. We were never allowed to see the process.

New Zealand first started processing velvet in 1974. K.J. Kim from Korea associated with Wilson Neill and Luggate Game Packers. Johnny Wang associated with T.J. Edmonds.

The processing formula was considered a secret and was smuggled out of China. K.J. Kim worked day and night with mixed results. There were some horrible failures that confirmed that he was experimenting as he went along. Johnny Wang, who had had experience with Alaska Reindeer velvet was better organized but he too worked at night and kept his formula secret. What we were trying to do was copy what Russia and China had achieved over the decades where they used a natural drying process with a high labour content. We were trying to oven dry and achieve the same result.

Access to Russia or China in the 1970's was impossible. However, in June 1981 I visited China with the New Zealand Deer Farmers Association delegation. It was the time for cutting and processing deer velvet. I filmed and took all the notes I could on velvet processing. It was fascinating, highly labour intensive and the skills handed down from generations. At last we had gained access and were able to study the experts.

In 1982 we set about incorporating what we have learned into our processing at our Luggate factory. Comparing notes with the late Dick Hughes of Wrightson Deer Horn I believe this became the turning point for processed NZ velvet. Russian and Chinese velvet antler is considered the world's best. I guess that is obvious when the only velvet

had previously come from either Russia or China. I was to learn later that both Russia, and more so China, had had velvet rejected for export. This was because in truly natural drying, as practised in those countries, any adverse change in weather pattern can cause velvet to spoil at a certain stage during the process, and this process can take up to three months to complete.

The major consumption of velvet is in the winter months of the northern hemisphere. The market commences buying from October which fits in ideally with the growing and processing of Russia and China.

The processing criteria for New Zealand should be summarised as follows:-

- (1) Process to the standard of Russia and China
- (2) Process to meet the market which emerges in October, the onset of the northern winter.

### **2.1 Process to the Standard**

Our velvet is becoming heavier and more beamy each year as the age of the velveting herd increases and breeding and selection takes place. However, lack of blood and quality of freezing we as processors have no control over, and we see this as an area in which the GIB (using part of the velvet levies, estimated to be in excess of \$600,000 1989/90), and the NZVA could combine in an education program which would ultimately increase the returns for both farmers and processor exporters.

### **2.2 Processing to Meet the Market**

I would say 90% of NZ processors, process to a highly acceptable standard. Over the years those that have not, have fallen by the wayside. If you make a mistake it costs you dearly and you are out of business. With a combination of natural and oven drying it takes from 40 to 60 days to complete the process. NZ now processes to a standard which has become known by the market to be higher than China and our quality control is far better.

### **3. Marketing**

As an example of typical velvet marketing (trading) I will explain how it worked this year (1988/89). Velvet marketing is a spot market business. Knowledge is gained of the world's potential supply, existing stocks on hand, where it is held, Korea's check price system, and Korea's economy.

Representatives of the NZ industry travel to Korea in October and negotiate with the Korean Pharmaceutical Traders Association. Quality and cutting are all discussed. Individual processors and exporters combine all this information and return to NZ. Traditionally the buying season does not truly commence until the results of first Wrightsons Pool where the new season's price levels are confirmed, and then it is played on an individual company basis.

Producers must realise that even when processors purchase velvet they do not have confirmed sales. Confirmed sales are only made months after when the velvet has been finally dried, graded, trimmed and offered to the market. If the market has strengthened it is the exporters gain. If the market has weakened it is the exporters loss. Knowledge of this product and its market is not easily learned as so many factors can change. Because buying from the producer is highly competitive the producers interests are protected. In May the Korean buying season tails off. Processors and exporters must carry over stock to be sold when the season recommences in October.

### **4. Some General Comments on the Velvet Market**

Don't let ourselves be fooled by published statistics. The true export value is unknown to government statisticians who can only base their information on the known facts as supplied by statutory bodies such as the GIB. As a check on my earlier figure we can for

instance take the published results of the Wrightson Velvet Pools for 1988/89. We calculate 56 tonnes for a total of \$8.5m. This gives an average of \$151 per kilogram. Add forty dollars per kilogram for processing and exporting: this equals \$191 per kilogram. Multiply by 170 tonnes produced. This equals \$32 million.

If you take into account that more lower quality velvet is in the pool than the average farmer produces, you soon get to my previous estimate of \$34m for 1988/89 season, and I think you will find that this is significantly more than the eventual Government Statistics will show.

The actual quantity imported into our major market South Korea is unknown. It is estimated 50% is smuggled due to high import taxes and duties. The importing countries that the velvet is often consigned to are not the ultimate destinations of the products. Those who have grown up with this industry understand it fully and you just have to believe what they say as being correct. The world's velvet industry rises and falls on South Korea. I would venture to say that 85% of the world's Elk type and Red Deer velvet finds its way to South Korea. When the Korean economy fell in 1980/81 the velvet prices crashed. When the colouring scandal was exposed in 1983 the velvet prices crashed.

Once farmers have decided to cut deer antler off at the velvet stage the velvet is programmed for the Korean market. You can not make scouts woggles, buttons or knife handles out of it.

As Dr Peter Yoon told us at the NZDFA Conference in May (1989) it is a highly sought after product for the Oriental Medicine business historically, and this is not likely to change. We are convinced of that.

For the deer farmers it has turned out to be a very profitable form of farming. The question has been asked of many farmers who run large velvetting herds and you get a similar response; that even at returns of a third or quarter of last season they would still farm for velvet. All breeding stags grow antler every year. All stags are velvetted. A one to twenty ratio of stags to hinds could be considered average. All antler is removed in a normal farming operation.

\$150 per kilo could be considered as the lowest price for 'A' grade velvet over the last three years. \$15 per kilo is the highest price for hard antler. The purpose of this comparison is that if we only received \$50 per kilogram we would still be removing antler for the velvet industry. It is an essential part of our farming operations. Deer farmers are very fortunate that the methods of offering this product to the processors, by way of the velvet pools, guarantees them the top price available. David Ward of Wrightson Dalgety pioneered the Velvet Pools, this I believe was a breakthrough from the on-farm bartering that used to take place where the object was to buy as cheaply as you were able.

Today producers have the following options.

- (1) Velvet Pools; Wrightsons, Fortex, or at local DFA branch level.
- (2) On-farm tendering.
- (3) Accepting the going rate at collection centres or on farm.
- (4) Selling on consignment in a processed state.

All these systems help guarantee the producer the fair market price. It is interesting to note that if it were not for frozen velvet being able to be exported then this year's price would not have risen to the level it had. At the first Wrightson Pool a buyer from outside New Zealand bid an average \$20 per kilogram above the nearest competitor for the majority of the velvet. This set the buying price for the season. This is one of the reasons I think it is ridiculous to ban the export of frozen unprocessed velvet.

To summarise I would like to say this. The velvet levy stands at nearly \$0.5m this year. If I had the decision I would give at least half of that to Invermay to immediately put together recommendations for the coming 1989 velvet season to cover

- (1) Velvetting methods and systems to retain maximum blood.
- (2) Handling and freezing methods to maximise quality.
- (3) Study how Russia can produce antler at the 'B' or 'C' stage of growth without calcification for which they receive the world's premium price. Calcification of the antler is the major factor affecting the timing of when the New Zealand velvet is removed. If the base is calcified then the antler has been left to grow too long.
- (4) Market information -

Dr Peter Yoon talked at the NZDFA Conference of his preferences for less blood in certain areas of the velvet and for shorter velvet. This is contrary to what the importers and wholesalers are telling us. Surely it is very basic; we must have research at the end user stage of the velvet chain and be ready to change direction as the market dictates.

This sort of information is all available and needs, for example, the experienced team approach that Invermay has, combined with an experienced industry consultant.

To my mind either take this approach or look at reducing the levy. The time has come to take the approach that benefits the velvet industry. It is a very real business.

We have the ingredients to produce some of the world's top quality velvet antler. We will only achieve this by aiming to produce the premium article. It is not by-product. If you were in China or Russia they would tell you that venison is the by-product.

In conclusion; say that this year New Zealand's velvet herd totals 100,000 stags and we produce over 200 tonnes of frozen velvet. We are expanding rapidly. The capacity for the now freed up Russia and China to over supply the world market is a real threat not to be under estimated.

However, we have to ask ourselves just what is happening in the market in South Korea. The mix of produce imported by that country according to published figures several years ago was somewhere between 200-400 tonnes of hard antler and 20-22 tonnes of dried product. We know from NZ's own point of view that the quantity of dried product imported has at least doubled at this point in time.

Do we in reality face an oversupply situation or are we seeing a move from the now increasingly wealthy South Korean end user in favour of the dried product over the hard antler. Have the Eastern Europeans come to this conclusion as we see them push towards "farming" their wild herds rather than allowing them to "free range" and harvesting the hard antler only, from the majority of their herds.

However, whatever the statistics, the velvet market is Korea, and the law of supply and demand is real. Velvet antler has no use other than to the oriental medicine business in its widest sense. Our one consolation is that our efficiency in farming will allow us to produce profitably for prices lower than we receive today. We have the most sophisticated communication systems from the market to the producers via the Game Industry Board, Farmer Magazine, Processors and Exporters, NZ Veterinary Association.

For the veterinary profession to remain highly credible in the deer farming industry you must take a positive approach in assisting the farmer to increase the quality of the velvet antler in the areas highlighted. Farmers have a wide variety of yards and velvetting facilities which limits the veterinarian's control of antler removal. Could minor inexpensive adjustments improve the veterinarian's lot and the farmer's velvet? A guideline booklet should be produced alongside the Game Industry Board/Invermay approach and should also include input from the veterinary profession.

**We are dealing with a Multi Million Dollar Industry.**