

# **KIKO MEAT GOATS**

## ***THE FULL STORY OF THE DEVELOPMENT OF KIKO MEAT GOATS IN NEW ZEALAND FROM 1978 TO 1994***

GARRICK BATTEN © 2013

There are several versions in the USA of the origin and development of Kiko goats in New Zealand and imported to USA in 1994/5. Even the direct quotes in USA literature of my original paper presented at the 3rd International Goat Conference in Brazil in 1987 have errors. Plus true information and facts have been interpreted for marketing reasons by the original importers to USA in 1994/5 and subsequent breeders in ways best suited to their marketing objectives. In addition, there has been the Chinese-whispers effect that has turned facts into something else.

The Caprinex objective in 1978 was for a goat best suited to New Zealand hill country pastoral conditions for brush weed and pasture control and meat production, that met on-farm requirements of low input, low cost and high profit.

From observation and studies of New Zealand feral goats it was clear that there was a size range in the estimated 300,000 feral goats in the 1970's. Export goat meat prices were directly related to size. Bigger equalled more money for meat and skin. Bigger goats were considered likely to be more effective in controlling brushweeds. Feral goat breeding and scope offered breeding opportunities not available in existing dairy goat populations that were then largely farmed in very small hobby herds.

Caprinex decided that there was a need for a New Zealand meat goat to capitalise on goat meat market opportunities and hill country brush weed control requirements. The focus was to be on a maternal breed to produce lots of quick growing progeny to suit New Zealand pastoral farming conditions and management. The then market, as it is today, has no specifications for meat quality other than weight, so carcass and meat quality was of less importance. That also meant that there were fewer selection factors needed, so progress could be maximised.

As it has turned out, Boer goats that became available in the 1990s can provide a terminal sire for better carcass confirmation if that is required. That does not necessarily mean higher meat yield. Developing a dual purpose animal was not part of our objectives. Animal production parameters emphasises growth rate and weaning percentage as significant meat production factors. Animal management emphasises factors such as feet/h hoof shape and lack of disease, udder shape, attachment support and teat placement, teeth and jaws, and temperament. We set a breeding objective of maximum meat production per kg of breeding doe before the

first winter. Under New Zealand pastoral conditions goat weight plateaus from 8-12 months of age and slaughter animals are desirably off the farm by that stage.

Initially we screened about 10,000 feral goats collected from various districts over 1978-79. That number is not guaranteed but there were over 5,000 on one farm. From them we selected about 1,000 for close inspection. We chose larger does that had kidded and this is quite important because in the feral state does will get pregnant as soon as they are able and lifetime size will be stunted. Selected animals had to be structurally sound in mouth, feet and udder. We deliberately excluded does that showed difficult behavioural tendencies in the yards. One notable characteristic was that grey roan animals that we call "blue" were wilder than others. As best able we chose blocky body shape, and good udder attachments, and udder size as the only visual reflection of milk production. And we selected goats that I liked. Being happy with the animals that you work with is a very important aspect of livestock farming. Clearly none of these initial physical and subjective selection factors are particularly effective but that was the best that could be used in the circumstances.

The 20 selected does plus 6 that were already on hand had an average liveweight of 32kg at first mating compared with the average feral doe liveweight of 25-27kg. We knew that feral goat milk production was not high with an average of 1.5 litres for a 3-5 month lactation. Yet milk supply is directly related to kid growth rate, and early growth rate was critical to meet our breeding objective.

As Secretary of a cooperative group of 17 dairy goat farmers and a dairy goat judge, I had the opportunity for several years to identify dairy does of various breeds (British Toggenberg, Saanen, Anglo Nubian, and British Alpine) and select buck kids from them. While the emphasis was on large, meaty-type high milk producing dairy does with sound confirmation, the problem was avoiding faults associated with dairy farming that would not fit our free ranging, tough, go anywhere, eat anything animal breeding objectives. Intensive dairy goat farming does not automatically generate this sort of animal. In addition the Anglo Nubian and British Alpine breeds have a very narrow genetic base in New Zealand, so limiting the available genetic potential. My daughter raised 10 or so of these buck kids each year, we evaluated them and used 2 or 3 new ones each year for mating with the expanding doe flock. The crossbred dairy feral progeny formed the basis for the Kiko breed.

Selection parameters then and always were growth rate and farmability. Growth rate is relatively easy to measure after allowing for birth dates and multiple births. Farmability is a mixture of survivability under reasonably stressful management and

nutritional conditions such as the ability to handle 25% browse content in the diet, walk hills daily in search of feed, resist parasites and foot problems, adjust to minimum husbandry and management regimes and produce as much profit as possible each year. The labour constraints of New Zealand hill country farming were constantly in mind. Profit is a very important concept in an unsubsidised industry, reflecting both costs of husbandry and management, meat income and synergistic weed and pasture control benefits. That in turn is influenced by goat growth rate, number of kids, losses of does and their progeny and doe lifetime performance.

There were some deliberate policies to test and evaluate farmability. For example, each winter goats spent time on a heavy, wet clay soil property to challenge their feet. Goats that went lame were either culled directly or their subsequent production levels fell below the required standard. Lame goats have more difficulty walking far enough each day to get enough to eat for their potential, so they do not perform.

The dairy breed crossing programme continued from 1979 to 1986. We were retaining the best 20% of buck kids born each year for evaluation and from 1984 using the top ones when we started interbreeding the crossbreeds. During this time we also added outside does that met the selection criteria, and selected from the retained doe kids that were in the top 50% for growth rate of those born, using independent culling levels and criteria such as having to produce twins at first kidding, and growth rate. These were added if they were superior to the does already in the herd. By 1986 the herd had grown to 150 does.

As a staff member of the Ministry of Agriculture and Fisheries I had access to MAF geneticists and their advice which was to “keep it simple”. So the breeding philosophy was to use population genetics to maximise the source population, focus on as few selection parameters as possible, measure and keep good records, and mate best to best. We chose to use independent culling levels. We were also able to capitalise on the independence of MAF staff to verify records.

The concept of population genetics is quite different to pedigree or family based genetics. Keep in mind that it is the basis of this breed. It is a technical topic and not necessarily easy to grasp and needs to be dealt with separately. Population genetics is based on numbers and 150 does were not enough. In 1986 Caprinex became involved with five other people and formed GOATEX GROUP LIMITED (not LLC).

A veterinarian and an animal exporter, both of whom were also farmers, and three large scale hill country farmers, one of whom later became a goat livestock agent for the largest farm servicing company in New Zealand, became shareholders. We were all committed to the same Caprinex objectives and methods of achieving them. Immediately the herd increased to 600 does over 4 farms, increasing to 1,000 in

1987. From this base an elite, open nucleus central herd of 100 does was selected and run on one farm, and it was re-evaluated each year to be the best 100 does available. From this came the bucks used for breeding in all shareholders herds including the central herd. So a USA literature statement that after three generations the crossbreds were interbred to fix a composite breed is clearly incorrect.

Introducing the breed to the 3rd International Goat Conference increased offshore interest and GOATEX GROUP LTD continued to export genetic material and goats. This also enabled us to evaluate Kiko goats in a range of climatic and management conditions from tropical Pacific to Nepalese mountains. The first American Kiko imports from GOATEX GROUP LTD were four bucks imported in 1991 to Hawaii by Dr. An Peischel. They ranked number 2-5 of the male kids of that year's birth.

Four major events occurred in the intervening years from 1986 to 1994 that should be kept in mind. Firstly there were two distinct lines of goats that were being developed, of a polled, blocky type animal and a more angular horned animal. There is some research evidence that polled animals are 7% + more productive than horned animals. Secondly there was a huge influx of new genes into the breeding herd in the late 1980's, and thirdly independent culling levels had moved on from feet as a major culling factor to include parasite tolerance. Shareholders were reduced from six to three.

In the early 1990's circumstances changed on some of the shareholders' farms and the project was reduced to only the 100 doe central herd that by 1994 had been reduced to about half. However the breeding policies of few selection factors, an open nucleus, independent culling levels and breeding best to best were continued by the three remaining shareholders. The GOATEX GROUP LTD company's shares were sold in 1994 including this doe herd plus some yearling does and bucks, and records of one generation of parentage only, despite subsequent North American Registry details. Some of these were the animals imported into the United States in the mid 1990's where they formed only part of the animals sold as Kiko. Construction of their four generation pedigrees and of their relationship with other imported Kiko animals was imaginative. Statements to the contrary are misleading. The purchasers who then imported animals into United States, operating as GOATEX GROUP LLC had no involvement in the GOATEX GROUP LTD, its activities or events prior to their purchase in 1994. Caprinex had limited knowledge and takes no responsibility for subsequent breeding and marketing activities.

History of the Kiko breed as presented in the USA seems to have taken the marketing stories presented by GOATEX GROUP LLC (the importers and original USA sellers) and patched them onto the paper presented at the 3rd International

Goat Conference in Brazil of the 1984 situation. This has been reproduced extensively in goat literature, comment, authoritative statements and on US breeders' web-sites. It ignored what had happened in the similar time following of seven years that had profound effects on development of the Kiko goats bred by the GOATEX company shareholders. Those goats had no genetic relationship with other goats called purebred Kiko in the 1990s USA imports.