

NEW ZEALAND SOCIETY OF ANIMAL PRODUCTION LIFE MEMBERSHIP

Dr George Wickham

Wool and fibre production frequently have been discussed at Conferences of this Society and at this meeting there is a further session devoted to the topic. While most sheep farmers have a good knowledge of the fleece weights of their sheep and also the yield and micron diameters of the different classes of wool, our knowledge of the type of fibres and the follicles in the skin which produce fibre has arisen from studies such as those on New Zealand Romneys and particularly the N-type Romney conducted by a founding member of this Society, the late Dr F.W. Dry.

On this occasion one of the last postgraduate students of Dr Dry at Massey Agricultural College, George Arthur Wickham, is nominated for Life Membership of this Society. It is a coincidence, but then could be a factor associated with Dr Wickham's later involvement with Drysdale sheep, that his mother lived close to the farm of Mr Neilson at Karere near Palmerston North where in 1931 Dr Dry found the particularly hairy Romney ram lamb which produced coarse medullated fibres, due to the presence of the N- gene. George Wickham himself appeared about a year after the ram - both issues are unrelated.

George Wickham graduated BAgSc from Massey Agricultural College in 1955 and completed his Masters degree, gaining First Class Honours in Sheep Husbandry and Genetics, three years later. His thesis study concerned the various types of fibres in the fleece and the wool-growing follicles in the skin and for this N-type lambs were valuable experimental models. At that time hairiness in the fleece of Romney sheep was a characteristic strongly selected against by sheepbreeders so that Dr Dry's odd looking animals, including many with horns, were kept out of the gaze of farmers and visitors at Massey College or were grazed on the properties of several farmers distant from Massey who were prepared to assist in the conduct of the research. Part of George Wickham's introduction to genetic and wool research thus involved the catching of lambs of variable ages to record details of parentage and early lamb coat characteristics under adverse conditions of large paddocks, gorse bushes and slack fences and nor was the ground always flat. With Romney sheep the prenatal impairment of fibre growth was evident and Dr Wickham's PhD studies completed in 1963 at the University of Leeds therefore dealt with factors that might be responsible for the prenatal check to fibre growth.

To study this growth check, he attempted to take skin from the lamb developing in the uterus, halfway through pregnancy, hold it in low temperature storage for later autografting to the lamb several weeks after birth and then to examine how the transplanted tissue and wool follicles produced their fibres. He obtained Romney Marsh ewes from a stud farm in Kent, utilised an Animal Surgery at Cambridge University and subsequently transported the ewes back to Leeds to await the birth of any lambs. There were some disappointments - 2 of 7 ewes produced lambs in the first

year, nothing was produced the following year when all surgery was conducted in a basement laboratory at the Department of Anatomy in The Medical School at Leeds, but fortunately, after improvement in technique successful births occurred to ewes operated on at either Cambridge or Leeds in the third year. For one faced with the prospect of a Ph.D. thesis requirement, the fact that the autografted foetal skin developed on some of the lambs and even produced carpet-type fibres was both timely and satisfying.

On his return to New Zealand he worked as a Research Scientist at Wool Research Organisation Lincoln and from 1965 has held a lecturing position initially in Sheep Husbandry and now Animal Science at Massey University and where he still continues to be employed.

His teaching duties have mainly concerned courses in wool and fibre biology and sheep production delivered to students taking farming and Wool Technology diplomas and Agricultural and Veterinary Science degrees. The main thrust of such courses has been to discuss the biology of the fleece and how management and other factors affects the fibre and its resultant manufacturing qualities.

A number of postgraduate students have also benefited from George Wickham's guidance and readily given assistance in the conduct of their experimental programmes. Thus there have been a range of studies involving winter nutrition of sheep, whether or not genotype x environment interactions are important in the Romney breed, discolouration of wool due to dung or pen stain, and a major study of the records of a Perendale sheep flock. The calculations of genetic and phenotypic parameters for the Perendale have been particularly valuable for the design of breeding plans for that breed and in the development of Animalplan utilised by studbreeders. He also has been an advocate for the use of synthetic breeds of sheep for commercial farming and at Massey developed a Merper strain of sheep and also a Borroola Merino Perendale hybrid, some of which he farms himself.

Additional to sheep, Dr Wickham has been interested in other species of animals. At various times he has advocated to his colleagues investigations into the use of rabbits farmed for their efficient production of protein. Also the possum has been of scientific and production interest to him; its skin and fur cycle have been studied and in earlier years when possum skins were more valuable than today, many of these animals were trapped in the Tararua Ranges to finance some of his early University education. Then too he has been collecting information on the sport horse and considering how the associated industry may be developed. Thus, earlier at this meeting he was co-author of the first paper given to this Society on horse production. As well, the goat industry has also benefited from his interest and knowledge. When the Mohair Producers' Association was established in the early 1970's, George Wickham provided technical assistance and advice as to the fibre characteristics that might be recorded and how breed improvement might be achieved. He was a member of the inspectorate that graded Angora goats prior to

registration by the breed society and has judged goats at several A & P shows including Hawkes Bay, Manawatu and Masterton. He has also provided technical assistance to a public company as well as individual producers farming Cashmere goats and wanting to use artificial insemination to assist in breed improvement.

Dr Wickham has participated in several consultancies reviewing sheep production overseas. These include a study of carpet wool sheep in India for New Zealand Ministry of Foreign Affairs, a study of Tan sheep which are bred for early slaughter and lamb skins in Ninxia Autonomous region of China and he has also reported on methods of evaluating Chinese Merino sheep in Xinjian Province of that country. There was also a consultancy to the United Arab Emirates in 1976, but fortunately for many of our sheep farmers currently in the business of producing animals for the Middle East, one conclusion reached that "the prospects for live sheep exports from New Zealand do not seem good" does not apply now.

Dr Wickham's understanding of the Animal industries and his editorial skills have been utilised by many colleagues

and others planning experiments. He was joint-Editor of both Volumes of *Sheep Production* 1. *Breeding and Reproduction* and 2. *Feeding, Growth and Health*, published by the New Zealand Institute of Agricultural Science and he played a leading role in the preparation of the Occasional Publication of this Society, *Guidelines for Wool Production*.

He served on the Management Committee for several years, including three as Editor of the Proceedings and was President of the Society in 1981.

Agricultural Science and Animal Production in New Zealand has been well served by this member. It is because of his contributions as a scientist genuinely interested in sheep and other animals, as a stimulator of ideas among his colleagues, and as a teacher of students both young and mature, that honorary life membership of the New Zealand Society of Animal Production is recommended.

M.F. McDonald