



1984

(Stringleman, H. & Peden, R., 2009)

Sheep farming

Changes from the 20th century

The grassland revolution

By the beginning of the 20th century, New Zealand's sheep-farming industry was geared up to produce meat for the British market and wool for the worsted trade centred around Bradford, England.

The next 80 years were more of the same – more wool and more meat. Applying science to agriculture led to 'the grassland revolution', where the New Zealand countryside was increasingly turned over to growing more and better grasses for livestock production. Agronomists, plant breeders, soil scientists, geneticists and animal breeders all contributed to increasing sheep numbers and improving production per sheep.

The golden years

The two decades after the Second World War were the golden years for New Zealand sheep farmers. Experiments in 1948 showed that fertiliser could be successfully spread from aeroplanes, and commercial aerial topdressing began in 1949, increasing the productivity of hill country.

In the post-war period Britain took all the meat and wool New Zealand could produce. As a result, sheep numbers increased by 40% between 1951 and 1961.

The end of the golden weather

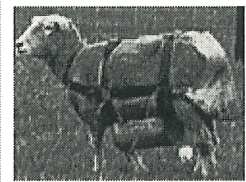
By the early 1970s the outlook for sheep farming was not good. In 1973 Britain joined the European Economic Community, and the first 'oil shock' occurred, raising the costs of transport and production. Wool prices fell because of competition from synthetic fibres and changes in fashion – the start of a decline from which they have never recovered.

Government subsidies kept farming buoyant despite the falling prices and increasing costs. In 1982 sheep numbers peaked at 70,301,461. In 1985–86 the government abruptly removed all subsidies for farmers, and sheep numbers dropped precipitously. Ten years after their historic peak they had fallen 25%, and in the next decade they fell another 25%.

Farmers respond

Sheep farmers have responded to the new economic environment by becoming more efficient and changing the focus of their production. For some, wool has become almost a liability as the costs of shearing and marketing leave little profit. For these farmers, breeding dual-purpose sheep has been replaced by a focus on prime lamb production using new sheep breeds.

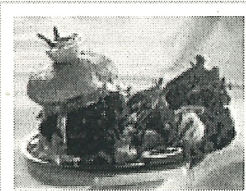
Performance-based selection



Researching the 'shower of fertility'



Helping the farmer through a crisis



Lamburger



Turanganui Romneys

Others have looked to improve their sheep by shifting away from selecting on type to performance-based selection, which focuses on traits such as wool weight, fertility and lamb growth rates. A National Flock Recording Scheme was set up in 1967, administered by the Department of Agriculture. It was revamped in 1976 as Sheeplan, and by the early 1980s half a million ewes and 1,300 ram-breeding flocks were having their performance recorded annually. Since 2002 the scheme has been run by Sheep Improvement Ltd, a division of Meat and Wool New Zealand. A genetic database provides breeding values and other genetic information, helping breeders and ram buyers to select more productive sheep.

Group breeding schemes

Group breeding schemes have also been set up, based on mandatory performance recording. The Central Districts Romney Group was established in 1969 to improve the productivity of Romney flocks in the central North Island. One member of the group lifted his flock's lambing performance from 90% to 150% through genetic improvements. Many Romney breeders have supported regional group breeding schemes, and the Coopworth Society (of Coopworth breeders) made performance recording mandatory when it was set up in 1968. Weight and average fibre diameter of wool, liveweight, numbers of lambs surviving to weaning, and weaning weights are some of the traits measured by farmers. Each of these has a known heritability score, which measures the likelihood of a trait being passed on.

21st-century wool

In the early 2000s, just over 80% of New Zealand wool was from cross-bred animals. Merino wool accounted for 5–7%, and Corriedale/halfbred types about 10–12%. Wool purchased by European, North American and Australian buyers was usually shipped to China, where it was spun into yarn – lower labour costs have made China the world's centre for wool spinning.

Artificial breeding

Performance recording has transformed the stud sheep industry since the 1980s. Once the top-ranked sheep are found, their superior genes can be used widely through artificial breeding. Artificial insemination and ova transplants have improved the genetic bases of studs, which then sell improved rams to commercial breeders.

The shift in emphasis to selecting a sheep on its performance has helped lift the productivity of the national flock. Between 1992 and 2002 the number of breeding ewes and hoggets in New Zealand fell by 24%, yet between 1993 and 2003 the tonnage of lamb meat processed increased by 22.4%.

Biographies



Walter Godfrey Bowen, 1922–1994



Malcolm McRae Burns, 1910–1986



Lawson Lysnar Copland Field, 1896–1981



Enoch Bruce Levy, 1892–1985

How to cite this page: Hugh Stringleman and Robert Peden. 'Sheep farming - Changes from the 20th century, Te Ara - the Encyclopedia of New Zealand, updated 1-Mar-09
URL: <http://www.TeAra.govt.nz/en/sheep-farming/7>