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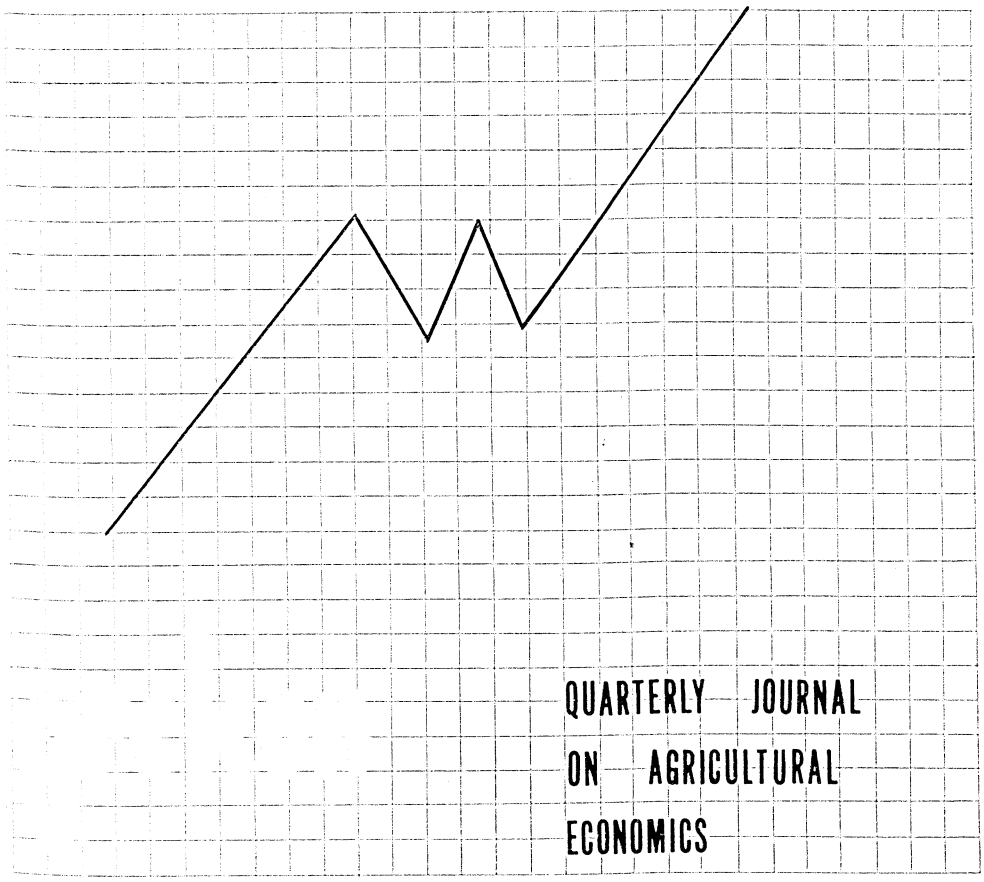

# QUARTERLY JOURNAL ON AGRICULTURAL ECONOMICS

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AGREKON

## REQUIREMENTS FOR CONTRIBUTIONS



Deserving articles in the field of agricultural economics, for publication in this journal, will be welcomed.

These articles should have a maximum length of 10 folio pages (including tables, graphs, etc.), typed in double spacing. All contributions should be submitted in triplicate to the editors, c.o Department of Agricultural Economics and Marketing, Pretoria, and should be received by the editors at least one month prior to publication date.

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# The Sheep and Wool Industry in South Africa

by J.F. van Huyssteen,

Press Department, South African Wool Board

## General

The South African sheep and wool industry, in which an estimated R2,500 million is invested, and on which about 750,000 people depend for a living, offers an even greater potential than has been experienced in the past - providing certain demands on the part of the four-legged fibre factory are met without any delay.

The woolled sheep trekked into the South African hinterland along with the first Europeans. The fact that we in South Africa enjoy a higher standard of living and income per head of population than the rest of the African continent, is due partly to the standard of livestock which has been maintained in the rural areas.

We march under the banner of gold but we are, to a large extent, carried on the backs of woolled sheep. Wool is interwoven with almost every segment of our economy. Unlike certain minerals, deposits of which are being exhausted or becoming uneconomical to exploit, the wool industry is a lasting asset which will hold its own, and has held its own, through the ages.

But the leaders of this industry say the time has nevertheless arrived when the spotlight has to be sharply focussed on the potential contained in our sheep population.

There are among the men, at the head of this well-organised industry, those who feel that we have reached the cross-roads; that for a variety of reasons there has been retrogression in the industry, and that wool production has not kept pace with the national development in other spheres during this period. They rightly point out that the country's sheep population reached its maximum of 50 million in 1931, whereas the population is today 37.8 million - of which only 33.7 million are woolled sheep.

The rapid increase in sheep numbers after 1924 was entirely due to an increase in the woolled sheep population, especially Merinos, and as a result of the remunerative prices which wool realised during the early twenties. This condition resulted in an expansion of Merino sheep farming into areas which were not so well-suited to the Merino.

With the decline of wool prices in the late twenties more and more sheep were kept on farms, in order to obtain a similar income to that previously realised. The marketing of stock was also restrained by the fact that sheep were in poor condition due to the successive poor seasons as from 1926. This led to overstocking, culminating in disastrous results during the severe drought of 1932-33, when about 10 million sheep died.

Leaders of the industry recently expressed concern that the industry has remained static during the past few years - especially when viewed against the background of other industrial development in the Republic. They added that they were convinced that the tempo of development of the sheep and wool industry can be considerably accelerated. The possibilities of extension and greater production are within our reach.

This is a challenge to at least two sections of our community - to the wool farmer personally and to the research worker to keep them provided with improved know-how. Add to this a little extra attention from the State, more co-ordination of effort, special attention to breeding stock etc. and the road blocks in the way of increased production will be removed.

It has been stated by some of our most eminent research workers that the stock of the South African sheep farmer is plagued by more pests than his counterpart in any other part of the world. The biggest of these threats to the increase in sheep population is the number of sheep diseases which will have to be countered and the number of predators which will have to be controlled. In addition, better grazing will have to be provided throughout the year.

Should South African wool producers succeed in this, and all that is needed for success is greater effort and a sharper concentration then the road to greater wool and meat production, and the resultant increase in foreign exchange, is clear.

There are at least 26 diseases which affect and decimate sheep, apart from all the sources of poisoning. Disease remains the greatest limiting factor to increased production, is the opinion of Dr. R.A. Alexander, former head of the Veterinary Research Institute at Onderstepoort. He states that the great problem is that, although disease may not exterminate our domestic animals, the annual drain by so-called erosion diseases is no less important in limiting continued production of animals and animal products.

Through the sustained efforts of research scientists, several of the great killing diseases that have devastated our herds and flocks in the past have been eliminated or brought under control.

Stock hygiene is an exact science which, if practised, can be fruitful in preventing or eliminating disease. The extension of training facilities for veterinarians at Onderstepoort, together with the recent increase in starting salaries of qualified men, are expected to make more veterinary surgeons available for enlightening farmers and combating disease.

The feed potential

To increase the country's wool clip, much will depend on successes achieved in the production of cultivated fodders, pastures and drought reserves. Under the guidance of pasture experts, progress is being made in this direction.

The total extent of sheep grazing areas is about 46 million morgen, or about 30 per cent of the surface of the country. Considerable variations are found within the boundaries of the sheep grazing areas, particularly as regards the average annual rainfall and the density of the vegetable cover. Forty-eight per cent of the Merinos, the predominant breed of sheep in the country (more than 70 per cent of the European-owned sheep) are found in areas with a mean annual rainfall of 15 inches and less, i.e. in the Karoo areas, where droughts occur fairly regularly. The livestock population depends, for the greater part, on the veld for its support, but in extensive areas supplementary feeding has to be resorted to in winter or during droughts. Considerable improvement has been made in this direction scientifically although an effective organisation, to provide drought rations where and when necessary, is still being developed.

There has been considerable improvement in the control of soil erosion in effective pasture management and the production of suitable fodder crops in the past few years. Drought-resistant fodder crops are already playing a role in these dry regions, but there is room for much greater extension of scientific farming methods and planning. Here again the farmer and scientist should work in close partnership.

Vermin - Sheep killers

Other limiting factors which have severely handicapped the growth of the sheep industry are the ravages of vermin and stray dogs, inefficient and defective fencing, the prevalence of stock theft, and parasites.

It has been calculated that in one year 400,000 sheep are being killed by predatory animals, of which the red jackal is the most dangerous. One of the drawbacks to the efficient destruction of these animals is divided control - vermin destruction being the task of the four provinces, each of which has different regulations and methods.

Research into methods of destruction has lately been stepped up considerably. In the continuing war the weapons used are fencing (a very costly item), hunts, trapping and poison. It is expected that new methods and techniques - some of them originated in the United States of America - will help to protect our flocks against the killers.

Capital outlay for the beginner

Another significant obstacle to further expansion is the high capital requirements to start a farming enterprise, quite apart from the price of land.

Agricultural economists have estimated the cost to buy land and sheep to begin farming today would be R50 per sheep. Mindful of the fact that a flock of 1,200 sheep is considered an economic unit, a prospective young farmer needs at least R60,000 to begin farming with reasonable prospects of success.

Small-stock properties can be greatly extended. There is no reason why every farmer, even if farming on only 200 morgen, cannot run a small flock of sheep. In the United Kingdom, Europe and in Scandinavia such flocks are found on the majority of small holdings. The same can be achieved in South Africa and our farmers will find that they will always have a small extra income. The sheep remains the animal in the stock and field-crop areas which provides the best income - particularly where sheep are included in a planned programme of mixed farming. And there are many advantages in incorporating sheep into the mixed farming pattern.

Capital investment in this respect is relatively low and a quick turn-over can be obtained. This is especially the case where fat lambs are sold at an early age. It must be remembered that the reproduction rate of mutton-type sheep is high, and that sheep feeding on weeds and waste grazing matter, better than other farm animals, can be used to clean up lands on which other stock would not graze normally.

The prospects for increasing and improving the South African wool clip are promising. Experts believe the greatest expansion can be effected in several big areas. The first is the winter-rainfall area of the Western Cape Province - generally known as the Republic's granary - where research workers and farmers have proved that woolled sheep can be supplementary to wheat. The number of sheep in the Western Cape is rising steadily; the mixed and balanced type of farming, since the introduction of lupins, is proving profitable because it requires little additional outlay of capital.

Two years ago statistics showed that the number of sheep per average-sized farm of 640 morgen has risen from 322 in 1948 to 600 today. Some farmers have abandoned cash crops entirely and have concentrated on wool and fat lamb production. The running of large numbers of sheep in these wheat lands has intensified the cultivation of lupins. Although the most important use of lupins is to fertilize the soil in rotation with wheat, it has been found that sheep thrive on them.

The entire coastal belt from the Cape Flats to the Native reserves, including the South Western Districts, is admirably suited to sheep farming; and already big areas have been turned into improved pastures, where only useless shrub once existed. For increased wool production a return of the animal factor on much of our agricultural land is required.

Another vast area, known as the Grassveld, stretching from the coasts of the Eastern Cape to the Transvaal in the north, is gradually accommodating more woolled sheep, and farmers are very optimistic over the future. A specially adapted sheep, known as the Grassveld Merino, has been bred for this high-rainfall, high-altitude area. Experimental stations and stud breeders are still trying to improve the

breed, in order to get a maximum amount of wool, a heavy carcase and a good lamb crop.

The extension of sheep numbers in the Highveld Region, which includes the so-called maize triangle of about 12 million morgen, holds great possibilities. At present almost 14 per cent of the country's woolled sheep are found in this area. But here, according to the experts, a determined and mixed-farming policy must be followed with the correct balance between grain, cattle and sheep. The three must be supplementary to one another. Success in a farming operation does not depend solely on the income from maize, wheat, groundnut, potato or other crops harvested, but also on the stock element carried.

Experiments have proved that sheep can be profitable. Sheep have a stabilising effect on income when incorporated in crop farming.

To achieve the favourable conditions which existed in the Highveld Region during 1932-33, when sheep farming in the region reached its peak, the sheep element to be introduced must not be based on wool production alone. Four sheep types are being introduced into the area as different conditions exist from east to west. Their production potential depends principally on wool, wool and mutton, mutton and wool and mutton alone. They will differ in character, therefore, with the emphasis on wool in the east to mutton in the far west. This is where the dual-purpose breed will show its value.

Expansion is also taking place in the Orange Free State, where the hardy German Merino - a dual purpose breed - is becoming increasingly popular. It is adapting itself very well to conditions in the plateau country. Several farmers imported pedigree rams from Germany recently. They are good "immigrants" and their production, both of wool and mutton, is very satisfactory even when grazing under pastoral conditions.

On the other hand, the number of European-owned sheep in Natal and Griqualand East decreased by a million during each decade since 1930, but in 1950 a change occurred and the sheep population started increasing. Professional officers of the Natal Region of the Department of Agriculture are convinced that sheep farming in Natal has a good future, as parts of it are as suitable for sheep as are the wool producing regions of the Eastern Transvaal and the North Eastern Cape.

The contribution of the four provinces to the total wool clip is as follows:

Cape Province 64 per cent
Orange Free State 20
Transvaal 7, and
Natal 2 per cent. The other 7 per cent is made up of wool from the Bantu areas.

The Textile industry

The South African textile industry, which has developed mostly in the past decade, today boasts an investment of more than R80 million in the form of land, buildings, plant and stocks. Because of the rapid growth in so short a time, one must expect that a period of consolidation will be to the advantage of the industry, which has a turnover of nearly R100 million and employs over 36,500 people in more than 170 factories. It uses over R50 million worth of raw materials annually (about half being from local sources) and pays out about R20 million in wages and salaries.

The Republic's textile industry may be divided into the following sections:

(a) The scouring, combing, spinning and weaving of wool for the manufacture of woollen and worsted yarn and piece goods;

(b) spinning and weaving of cotton and rayon;

(c) manufacture of blankets;

(d) carpet and felt industries; and

(e) the knitting industry.

South Africa's wool textile industry today comprises all the various basic processes of wool manufacturing. This means that wool is at present being scoured, carded, combed, spun, woven, knitted or felted in South Africa for the production of tops, yarns, piece goods, hosiery and other knitwear, blankets, carpets and felt. In most respects we can provide our own needs.

There are at the moment five combing mills, ten spinning mills and eight weaving mills, apart from the blanket factories. There are about 32 knitting mills using mainly wool yarn. There are five felt factories, three felt hat and three carpet factories as well as 12 wool washeries. These wool washeries scour more than 100 million lbs. of grease wool a year, which is one-third of the annual wool clip.

The problem for the future is the training of operatives, maintenance and technical staff. In a developing country, like South Africa, planned training of future technical and supervisory staff cannot be stressed often enough. Most of the textile workers, according to an industrial census, are Natives, viz. 61 per cent, Coloureds 21 per cent, Asiatics 7 and Europeans 11 per cent.

Considering the youthfulness of the textile industry, it is quite an achievement that South Africa has been able to export blankets and knitted goods to the Central African Federation, and lately also men's clothing to countries in Europe.

In view of the fast-growing population, especially the non-European section, and the rising standards of living, one can expect heavy demands to be made on our clothing factories in future. It has been calculated that between 10 and 15 per cent

of our wool production is processed locally; the rest is exported.

In future development, manufacturers will have the services of the South African Wool Textile Research Institute, established at Grahamstown in 1947. The Institute, concentrating on all aspects of the manufacture of woollen apparel, is serving industries as well as breeders; and its first research results are already being applied.

Optimism for the future

To sum up the situation, one could feel optimistic about the future of wool. Firstly, there is a production potential for wool in South Africa, and secondly, this product, constantly re-inforced as the greatest of all natural fibres by the efforts of scientists and breeders, will hold its own against the competition of synthetics. Because of substantial and profitable progress made on the scientific front in the past two decades, wool is today a much better clothing fibre than ever before. The men of science have placed it in a position to combat the man-made fibres on all strategic fronts.

More and more processes to enhance the easy-care properties of wool have been discovered in the past few years. These are being put into practice for the purpose of manufacturing wool end-products according to consumer demand. Wool producers have great faith in the united efforts and those of the publicity organisations - the South African Wool Board and its counterparts in Australia and New Zealand, the International Wool Secretariat, with headquarters in London, and the Wool Bureau, U.S.A. They are using all channels of promotion, publicity, education and research to enlarge the demand for wool and to combat vigorously the opposition of competing fibres. The potential market for wool is thus being fully explored.

Furthermore, the South African Wool Textile Industry is on a sound footing and is producing fabrics of very high quality. With the advance in technical skill and equipment, together with more extensive liaison which is developing between the industry and wool scientists (who are introducing new scientific processes and finishes into the mills and factories), a new era in the development of a vigorous and thrifty South African wool textile industry is on the horizon.