

## NOTES ON ANGORA GOAT FARMING.

By JAMES ANDREW.

This is not the first occasion on which the advantages and profits of Angora goat farming have been brought under the notice of the Royal Society of Tasmania, but as fifteen years have elapsed since the late Mr. John Swan read a paper on the subject, and the Honorary Secretary, Dr. Agnew, laid upon the table a letter with covering correspondence from the British Consul at Angora, giving particulars of the industry as conducted in Asia Minor, I may be excused for re-opening the question.

Since 1874, when this effort was made to stimulate popular interest in favour of a fair trial, in Tasmania, for a description of stock farming elsewhere found so profitable, little or nothing has been done; and although a few very small flocks of indifferently bred goats still remain in the colony, they do not appear to receive the attention they merit, and mohair, as the fleece of the Angora is termed in trade returns, does not figure amongst our exports.

It is my aim in submitting the following notes, to revive if possible the spirit of experiment which induced Mr. Swan—an experienced flock owner—to advocate the claims of goat farming as worthy of careful consideration.

In Asia Minor, the natural habitat of the Angora goat, whence the progenitors of all the stock now found in America, Africa and Australia were obtained, the hair of some of the best flocks, which is invariably pure white, was at one time so highly valued that its export was prohibited, and later, permission was granted to send it out of the country in a manufactured state only. At the present time the value of the hair exported from the province amounts to £200,000 per annum, which, however, is far exceeded by the production of other countries in which goat farming has become a settled industry.

The Cape Colony owes the introduction there of Angora goats, in the first instance, to a Colonel Henderson of Bombay; afterwards some were forwarded to the colony through Sir Titus Salt, who was the first English manufacturer of textile fabrics from their hair, and later Messrs. Mosenthal Bros., in the year 1856, secured some pure bred animals from Asia Minor. Since then there have been many private importations of stud stock, one of the most important of which was that of a Mr. J. B. Evans, who personally selected goats in the mountain districts round Angora.

This was in 1880, and in the following year I had an opportunity of inspecting some of the rams—which had sold at from £100 to £200 each—in the Graaf Reinet and Eastern districts. It was in 1862 that mohair first appeared amongst Cape exports, the quantity being 1,036 lbs., in 1865 the export was 7,000 lbs., valued at £368, but in the next decade the increase was marked, the figures being 1,148,000 lbs., valued at nearly £135,000; still another ten years, and although the clip was more than quadrupled, being 5,250,000 lbs., the price obtained for it had suffered great depreciation, the value being only £204,000.

The last published returns for 1887 show weight of hair exported 7,154,000 lbs., worth £268,500, a fall in price of 1d. per lb. on the previous year's clip. In addition there must be taken into account the value of exported skins during the same year, viz., £100,000, and even these figures fail to represent the total value of the products of this useful animal, as a large quantity of skins and leather are absorbed by home consumption. It is further necessary, when estimating the economic value of Angora goats, to remember that the meat of the wether or "kapata," as it is called in the Cape Colony, is excellent. Sir Samuel Wilson, to whose monograph on "The Angora Goat" I am much indebted for information, states that:—"Its flesh when in good condition is not inferior to mutton." He adds, "I have eaten the flesh of a half-bred which could not be distinguished from mutton, even in the carcase, and which on the table was considered quite a luxury." Further testimony is born by a Victorian sheep-owner of repute, who in February, 1873, reported to the President of the Acclimatisation Society in that colony that:—"Last winter I killed two wethers, full mouthed, which each weighed when dressed 80 lbs., the flesh of which when put upon the table was pronounced most delicious, being more rich and juicy than the best Merino mutton." I can fully endorse, from a somewhat lengthy experience of goat's flesh as an article of diet, all that these gentlemen say in its favour.

At the date of the compilation of the last returns the number of Angora goats in the Cape Colony was  $2\frac{1}{2}$  millions, and the other countries of South Africa, Natal, the Orange Free State, and the Transvaal also maintain a considerable number, and mohair is an important item of their exports.

A Mr. Scott of South Carolina, minister to Turkey in 1848, was the first to take Angoras to America, and there have been many subsequent importations; but the industry has never assumed the proportions attained in South Africa. I have not been able to obtain any recent returns, but from

evidence given before the United States Tarriff Commission in 1882, it appears there were then an estimated number of 100,000 goats in the country, yielding hair of over 200,000 lbs. weight per annum.

Flocks are now to be found in various states of the Union, in very varied climates, such as Oregon, Wyoming, Colorado, Texas, California, Missouri, and Arkansas, whilst an absolutely pure flock is owned by a Colonel Peters in Georgia.

For some years the growers in the States maintained their flocks under great discouragement, as the demand there for such fabrics as the hair was used for, fell off very rapidly. But the introduction of new materials gave a fresh impetus to their energies, and, to again quote the Tariff Commission, "The supply produced in the States, if multiplied threefold, would not be sufficient to furnish material for the plushes now used in the railroad cars of that country alone."

The industry had hardly been successfully established in the Cape Colony and America when steps were taken to introduce Angora goats into Victoria. A small flock was purchased at Broussa, near Trebizond, and shortly after arrival in the colony they were transferred to the care of the Acclimatisation Society. An addition to their number was made in 1863 when twelve pure rams of a very high-class were received as a present from the Imperial Acclimatisation Society of France. Two years later a further shipment of 93 carefully selected animals was forwarded from Asia Minor, *via* London. These cost the Society about £16 per head.

As the numbers increased the accommodation at the Royal Park, Melbourne, was found too limited, and the flock was dispersed in 1870. A large number of the inferior animals were sold, the price being fixed at five guineas per head—less than their actual value—but about fifty of the choice animals were sent to the Wimmera district to the care of Sir Samuel Wilson, who three years later reported:—"The flock of Angora goats now on the Wimmera is 108 in number besides a few young kids. From calculations carefully made this small flock, if well managed, and sufficient pasture allowed it to graze upon, will at the ordinary rate of increase reach in thirty years the very large number of 442,368. This number should be sufficient to displace all the common goats in the colony. In forty years at the same rate the pure flock would increase to over seven millions."

But to contemplate obtaining a flock of Angoras by depending on the natural increase of such pure bred animals as could be secured for a moderate expenditure of capital would prove both tedious and disheartening, and we have the pronounced success of cross-breeding in other countries

to guide those who may be desirous of commencing the industry. It has been found that the progeny of pure Angora rams and common goat ewes, produce in the third generation—the sire in each case being of pure stock—animals, which in appearance and characteristics are hardly to be distinguished from their male ancestors. Every succeeding cross more nearly approaches perfection, but the plebian taint is almost completely eliminated, and quite sufficiently so for commercial purposes, in the fourth generation. No matter what the colour of the female goat, black, brown, or grey, her offspring present the male characteristics to a pronounced degree, and in the third cross nearly every trace of colour has disappeared.

Thus a stock-farmer has at his disposal practically unlimited scope for increasing his general flock. It is manifest, however, that a small stud herd would have to be maintained to keep up the supply of pure bred males, which are of course alone used for breeding purposes, and the purchase of a few carefully selected Angora ewes would therefore be necessary. Many objections and as many defences of cross-breeding have been ably discussed at various times. On this subject Sir Samuel Wilson writes:—"It is stated by Mr. V. A. Niessen that the hair from the half-bred Angora is worth a shilling per pound, that from the three-quarter-bred, one shilling and sixpence per pound, that of the third cross, or seven-eighths-bred, would nearly equal in value that from the pure bred, and the fleece of the fifteen-sixteenths, or fourth remove, would be quite equal to that of the sire in purity, lustre, fineness, and length of fleece." He quotes also a letter addressed to the President of the Victorian Acclimatisation Society from the Hon. Robert Simson, "a large sheepowner, and a distinguished breeder of the Merino," dated 18th February, 1873, who enclosed samples of hair from descendants of three-quarter-bred ewes from the Cape Colony, and a pure bred ram. In regard to which Sir Samuel states:—"The specimens were all of excellent quality and excepting a greater degree of lustre which those from the pure bred Angora exhibited, they appeared so equal in value as scarcely to be distinguishable from each other. On the question of the cross between the Angora and common goat, I am ready to admit that crossing with the Angora, with a view gradually to improve the common goat, may produce valuable results; I wish it to be clearly understood that such animals or their progeny, even if pure sires be used for a thousand generations, can never become pure bred. The stain can never be washed away. Each cross with the pure blood reduces it by one half, but as division is infinite it never entirely disappears."



Theoretically, Sir Samuel Wilson's views are no doubt correct, practically, in connection with goat farming, they are unworkable. In the Cape Colony all the flocks, now numbering  $2\frac{1}{2}$  millions, have been raised by cross breeding, and a similar course has been followed in the United States with equal success; indeed, Mr. John Swan stated that he was informed, "the best flock in America never contained a pure bred female." Sir Titus Salt, too, is known to have raised a flock in this manner in England.

I sincerely regret that my specimens of hair, from a celebrated flock of goats in the Graaf Reinet district of the Cape Colony, have so suffered from moth during eight years' inattention that they but very imperfectly exhibit the gradations of successive crosses and the perfect sample which it is the aim of every flock owner to equal. They may, however, suffice to give some idea of the various grades through which animals with fleeces of good enough quality for a general flock are obtained.

It is hardly necessary to remark that the degree of attention given to the selection of the best stud rams, the proper classification of ewes, and the systematic culling of flocks, will determine the value of the staple product.

The fleece of the pure bred Angora often reaches to the ground, the locks measuring 12 or even 14 inches in length. The kind most in demand is only so much matted as to cling together near the root, remaining free and separate to the tip. The weight of hair varies as much in different individuals as does the yield of wool in sheep. Mr. Swan exhibited samples from the fleece of a pure goat which weighed 8 lbs. 10 oz. realising 2s. 6d. per lb. in the Home market; but perhaps 5 lbs. may be taken as a fair average of a well-kept grade flock shorn once a year. From my notes taken during shearing time at Graaf Reinet I find that ewes cut as much as  $6\frac{3}{4}$  lbs., whilst a ram was relieved of an 8 months' fleece weighing 7 lbs. Kids of 8 months old cut an average of 2 lbs. of very fine hair.

Sir Samuel Wilson advocated shearing twice a year, and his returns shows that the general average of both clips, the first in May, the second in October, was over  $3\frac{3}{4}$  lbs. Even although the expenses are largely increased there may be much to be said in favour of this double clip, for, as if unshorn the goat naturally sheds its hair in early spring, it is found necessary to remove the fleece—if only one shearing be adopted—in mid-winter when its protection is most required. The growth in the former case is probably stimulated by Nature making an effort to provide for the wants of the animal; and felting or matting is no doubt prevented by not allowing the hair to attain full length. For manufacturing purposes any staple over 4 in. in length is found sufficient,

so that the shorter clip is not detrimental to the value of the fleece

Shearing in South Africa is generally conducted in what, in Australia, would be considered a most slovenly manner. It is not unusual for a farmer to have the work done in the "kraals," or yards, and even if under cover the floor is more often than otherwise of earth. Goats are less troublesome to shear than sheep, but owing to the decided "lay" of the hair, men who can use both hands equally well have a considerable advantage. Sorting is, as a rule, very inefficiently carried out.

About the 1st June is the usual date for commencing operations, and in the Karoo, where a large proportion of the Angoras in the colony are kept, the nights at that time of the year are often bitterly cold. Bad weather immediately after shearing may cause terrible mortality amongst a flock if proper precautions are not taken, but the general conditions affecting stock farming are comparatively so unfavourable in the country alluded to, that but little harm need be anticipated in Tasmania. Cold alone does not appear to have a particularly bad effect, nor does a warm shower of rain; but cold and wet together are very destructive and should be carefully guarded against by providing shelter. In the Cape Colony all flocks are "kraaled" or yarded at night for protection against wild animals and depredatory natives, and slight shelter is often contrived for newly shorn goats, but in the Karoo there is no scrub or timber to afford a friendly lee should the flock be caught in a storm during the daytime, and thus the mortality is often great.

Goats are much more prolific than sheep, but Angoras less so than the common species, still a very large percentage of the ewes bear twin kids. The young are at birth very helpless, in marked contrast to lambs, and remain so for ten or twelve days, and as the ewes display maternal instinct in a very modified form, some trouble may be anticipated at this time, which is usually between August and October. Here, again, experience gained in South Africa is of little value when applied to Tasmania, but the advantages are all in favour of the latter, as the ewes would here be disturbed as little as possible until their kids gained strength and intelligence.

Mr. Swan states that:—"The trouble and expense of managing a flock would be less than that required for sheep. Goats are much more intelligent and are less liable to destruction by dogs." He adds:—"No ordinary fence will restrain them, and as they are restless, energetic, and destructive, cultivation is not profitable in their vicinity. Hawthorn hedges and ornamental shrubs possess peculiar

attractions for them." Mr. Swan further remarks :—"They have great attachment for home and can be depended upon to return to their sheds at night. Shelter should be provided for them, as they evince great aversion to rain and will remain under cover all day in wet weather."

There is no reason whatever why, if the goats kept here or in other colonies become very numerous, the area of pasturage available for sheep need be encroached upon. Indeed, the reverse would be found to be the case, as Angoras have been proved to be excellent pioneers in clearing up new country for sheep and cattle, and they not only do not injure but positively benefit other stock, especially sheep. An immense amount of land now almost, if not quite, valueless could be utilised for goat farming, for these animals will live and thrive where others would starve, and mountainous, scrubby, and wooded country, barren ranges, and heathy plains are alike suitable for their requirements; and by their activity, superior intelligence and fearlessness, they obtain sustenance where sheep would be incapable of venturing. They are also, with the exception of a short period immediately after shearing, as indifferant to climatic as they are to dietetic influences. In further reference to the latter there is one very important point to notice; they appear to suffer no inconvenience from being depastured on country where plants abound which, when eaten by sheep, prove fatal. In South Africa I know this is the case and Sir Samuel Wilson bears similar testimony, stating :—"Its freedom from disease, its activity, and endurance, and ability to feed on shrubs, bushes, weeds, and even poisonous plants with impunity give it a special value as the animal suited to the selector or the small freeholder with limited means."

It has been conclusively proved that the climate, as well as the pasturage and herbage of Australia and Tasmania, are peculiarly suitable for goat farming. No large outlay is required to form the nucleus of a flock, nor is any special knowledge requisite for their management; there are vast areas of vacant land awaiting settlement, and the inquiry naturally suggests itself how it is that the industry has failed to command the attention here or on the continent of Australia, which it has received elsewhere.

If some one of enterprising spirit will embark a few hundred pounds in such a venture the investment will, I am confident, prove remunerative. Islands are peculiarly adapted for the purpose, as secure boundary fences are naturally provided, and subdivision can often be arranged with the minimum of material.

There is one which I can recommend for tentative occupation, viz., the West Hunter Island to the north-west of Tasmania, in Bass Straits. It has an area of 20,000 acres, most of

which is rough feed very suitable for goats, and it may be rented from the Crown for £20 per annum on a 14 years' lease. Sheep cannot be kept there as the "lobelia" or poisonous tare of King's Island abounds and invariably proves fatal. The last attempt at stocking this island of which I have any knowledge was in 1882, when 600 ewes were placed there as an experiment, of which only 30 survived in about 6 months' time. The same plant has proved most disastrous to the efforts made to depasture sheep on King's Island, and if my conviction as to the immunity of the goat from its evil effects prove correct—and at least an inexpensive trial might be made—there is practically unlimited scope for many years to come in the unstocked islands of the Straits for the development of goat farming.

On the coast in various parts of the colony there are large heath-covered plains which may be similarly utilised, and experience might show that even the much-abused button rush country can be turned to account. Perhaps the energetic gentleman who has obtained the lease of Maria Island from the Government may be induced to set apart the southern end as a goat farm; the ground is poor, can maintain only few sheep, but has considerable capabilities as pasturage for the more active animals which feed principally by browsing.

The Tasmanian Stock Regulations at present in force absolutely prohibit the importation of goats from any place outside the Australasian colonies, but there are, no doubt, some perfectly pure bred Angoras to be secured in Victoria, New South Wales or South Australia, where small flocks are maintained. The common goat ewes are not difficult to obtain.

A certain amount of surplus stock must accumulate until after the third or fourth cross, when the hair of all should be of nearly equal value. The skins of such half-bred or three-quarter-bred "kapatas" or wethers as are killed for meat will be found for tanning purposes of far greater value than sheepskins, the leather being substantial and of attractive appearance. When the goats are killed carrying a medium length of fleece the skins make excellent and most ornamental mats, whether dyed or left of their natural colour, and find purchasers at all prices up to £1 each.

Goats have much more intelligence than sheep, are easily trained, and the employment of "voorboks" or leaders, kapatas of the common breed—chosen for size and strength—is infinitely better than to attempt working a flock with dogs. These leaders are considered indispensable in South Africa, they march in the van on making for the feeding ground in the morning, and lead the way home at night. As decoys



for yarding the flock at shearing time they are invaluable, and I have known them pilot slaughter stock on board vessels in the Cape Town docks without the least difficulty. Being of an otherwise valueless breed and having no fleece worth shearing they are consequently rarely handled and so losing all timidity amongst men they fully enjoy the dignity of their position.

Enquiries I have made to ascertain particulars of the Angora goats still remaining in Tasmania have not been successful. There is some reason for suspecting that attempts previously made here, and perhaps in the other colonies, to establish the industry have not been so successful as otherwise might have been the case, owing to the goats having been kept on open grass country. This is clearly a mistake. Rough, mountainous and scrubby ground is far more suitable, and it is with a view to encourage the occupation of such districts and so assist to a small extent in developing the natural resources of the colony that I venture to recommend the farming of Angora goats as an industry quite worth a patient and careful trial.