It has recently been suggested by the Glazé Kid Manufacturers’ Association of England that skins should be bought from the native by piece and not by weight. If this suggestion is adopted by the export buyers in Nigeria it will effectually put an end to this fraudulent practice.

**Damage caused by Skin Diseases.**

The diseases principally concerned, as far as my present knowledge goes, are: demodectic mange, streptothrixosis, sarcoptic mange, goat pox.

*Demodectic Mange*—I do not propose to do more than give a very brief description of the lesions of the various skin diseases, as they must all be familiar to you.

*Demodectic Mange* as it affects goats in Nigeria is a very insidious disease and unless in an advanced stage difficult of detection in the live animal.

There is little or no loss of hair and no appreciable amount of irritation, and it is only by the careful manipulation of the skin that the lesions can be detected. They are felt as small clearly circumscribed pea-sized nodules in the thickness of the skin. It is common to find several nodules closely set together in the same patch of skin and these groups to be situated in widely separated parts of the body.

It is only when the nodule has burst that any opening can be detected on the surface of the skin. When the nodule bursts it exudes a thick cheesy-like material which contains practically nothing but demodex.

The parasites are easily detected on microscopical examination of the pus.

When the skin is taken off the carcass the lesions are easily seen on the flesh side as pea-like projections.

Native butchers, appreciating the lessened monetary value of a diseased skin, puncture the nodules and rub the surface of the skin with a stone, or scrape it with a knife. After the skin has been sun-dried it is difficult to detect this faking, and for this reason such skins are sometimes accepted with primes and flaws quite unknowingly by the exporter.

I estimate that about 5 per cent. of all skins exported from Nigeria show the lesions or other evidence of demodectic mange.

Nigeria exports from one to one and a half million skins per annum; so the loss due to this one disease alone is considerable and the disease well worthy of our best efforts to find a cure or preventive.

*Specimen No. 4* shows clearly the blemishes caused by the lesions of demodectic mange. It shows also the grouping of the lesions and the situation of these groups in widely separated parts of the skin. Observe the pin-point holes on the grain side of the skin corresponding to the sites of the underlying pustules.

*Treatment and Prevention.*—I know of no form of treatment or prevention, and I am dubious of ever being able to cure the disease by the external application of parasiticide solutions.

I am wondering if it will be possible to immunize goats against the invasion of the parasites and the development of the pustules. I believe a form of metazoan immunity has been established against warbles in cattle. Why not a similar immunity against demodex?

This possible line of dealing worthy of investigation and I have some experimental work along future.

According to the distributive reduced in value.

A glazé kid of the type of 6d. to 7d. per square foot. Just raw skin into glazé kid. A loss to the extent of the cost of the prime.

Such a skin may cost 10c. of primes or firsts for which it paid. You will realize that legitimate grouse.

*Streptothrixosis.*—This skin Nigeria during the wet months of spontaneously after the cesario.

The lesions are confined to arises of the spine. On running affected animal the lesions can They are closely set together and length of the back.

On closer inspection the lesions like excrescences which are cosial depression in the skin. The lesion in streptothrixsis of cattle scraping of the moist skin lesion presence of a streptothrix—the c unable to show you a skin of gh the disease or the blemishes they.

The blemishes due to strop minute shallow depressions which a much reduced value varying with

*Curative and Preventive Methods* before, disappears spontaneously. If the slaughter of goats, therefore, wet months of the year the loss d could be eliminated. This pro Nigeria where goat flesh constitutes the native; but I have hopes the system of dipping in arsenical may do some good.

*Sarcoptic Mange.*—It is one lesions of this disease being a cat brought to light.

Specimen No. 5 is a glazé k showed extensive lesions of sarco the grain of the glazé kid has be thickened and corrugated.

A skin of this description would I am unable to say at present. Disease among goats in Nigeria, disease gets established in a herd animals are in poor condition it s
Treated by the Glacé Kid Manufacturers' Association should be bought from the native. If this suggestion is adopted by the manufacturers, it is certain that end to this fraudulent practice by Skin Diseases.

Concerned, as far as my present knowledge, streptothricosis, sarcoptic mange, or hair and no appreciable amount of careful manipulation of the skin that they are felt as small clearly circumferential thickness of the skin. It is common together in the same patch of skin usually separated parts of the body. has burst that any opening can be seen. When the nodule bursts it is which contains practically nothing

Based on microscopical examination of the carcass the lesions are easily seen as a pale, red rash on the surface of the skin: After the skin has been sutured, the lesion is visible for some time with primes or firsts quite unnoticeable. of all skins exported from evidence of demodectic mange.

A lecture on the lesions per disease alone is considerable and the forts to find a cure or preventive.

The lesions are confined mainly to the skin of the back and either side of the spine. On running the fingers along the skin of an affected animal the lesions can be felt as very small, hard scabs. They are closely set together and are very numerous along the whole length of the back.

On closer inspection the lesions are easily seen as minute wart-like excrescences which are easily peeled off; leaving a raw shallow depression in the skin. The lesions are somewhat similar to those seen in streptothricosis of cattle. Microscopical examination of a scraping of the moist skin lesion or of the scab demonstrates the presence of a streptothrix—the causative factor. I regret that I am unable to show you a skin of glacé kid demonstrating the lesions of the disease or the blemishes they cause in the tanned skin.

The blemishes due to streptothricosis show on the glacé kid as minute shallow depressions which render the leather unsightly, and of a much reduced value varying with the extent of the disease.

Curative and Preventive Measures. This disease, as I have said before, disappears spontaneously after the cessation of the rains. If the slaughter of goats, therefore, could be prevented during the wet months of the year the loss due to damaged skins from this cause could be eliminated. This procedure is of course impossible in Nigeria where goat flesh constitutes the main supply of the meat diet of the native; but I have hopes that it may be possible to institute a system of dipping in arsenical preparations before slaughter, which may do some good.

Sarcoptic Mange. It is only recently that the possibility of the existence of this disease among goats in Nigeria was brought to light. Specimen No. 5 is a glacé kid manufactured from a skin which showed extensive lesions of sarcoptic mange. You will notice how the grain of the glacé kid has been destroyed and the affected parts thickened and corrugated.

A skin of this description would be worthless to the manufacturer. I am unable to say at present what is the actual incidence of the disease among goats in Nigeria, but I do know that when once the disease gets established in a herd of goats, more especially if the animals are in poor condition it spreads rapidly from goat to goat as
Secondly, measures must be taken to prevent the spread of the skin diseases which are prevalent in the cattle.

A scheme for the education of the public in Nigeria and the maintenance of the disease will be an important part of this effort. The disease must be eradicated by the use of the various preventive measures which are available. The native inspectors will be appointed to carry out the supervision of the European inspectors and to stamp the skins as they are inspected.

The inspector will stamp each skin with a mark indicating the month and year of the inspection and the place of slaughter. The importer will be given a certificate of inspection by the inspector, which he will deliver to the importer.

The home buyers will be keenly enthusiastic to co-operate with the Government. As I have brought out in this paper, the exporter must make the bidders pay the full amount for the skin which is offered for sale. The Glace Kid must be scrupulously cleaned before being offered for sale. The Glace Kid must be free from all blemishes and the exporter must ensure that the skin is not damaged in any way.

The proposed system of control is as follows:

1. The skin should be of medium size and of good grain and size.
2. It should be well flayed and free from blemishes.
3. It should be as nearly square in Nos. 2 and 3.
4. It should be dried slowly in the open air, and shall be exposed to the sun for a longer period of time than is the case with the Glace Kid.
5. It should be free from the lesions of the Glace Kid.
It is just possible that the investigation will bring out the fact that the aerocopically undetectable form, and possible for a type of blemish shown which has not so far been definitely

d to be seen to a slight degree in sligh damage from bad drying.
chopping solutions are now being tried an efficient curative and preventive ciments with a 1 to 250 solution of value either as a curative or as a

skin disease in the same sense as with, the lesions of goat pox are amage to glucé kid.

so you a good idea of the damage at pox.

y partially manufactured into glucé first seven stages of manufacture (nure). Specimen No. 8 is a

would have shown up even more a light brown.

so to the manufacturer to the extent

strect on the hair side of a sundried ever, they are seen as circumscribes

ed, dark red or almost black colour

in Nigeria is not correctly known at re and extensive inspection of goats are detailed information on the forthcoming.

at the laboratory; but its use in the d. Should, however, the incidence restigation to be of serious moment n will be inaugurated.

it in this paper the extent of the various causes and the imperative sentiment control which would tend to a these controls.

'gnerian goat skins in the English rters are perhaps at times tempted up to the quality implied by the

imated which will give the home quality they will cease to buy our present prices.

EM OF CONTROL.

hat the butchers are taught how to hen are compelled by a system of the improved methods.

Secondly, measures must be taken to endeavour to lessen the incidence of the skin diseases which are responsible for damage to the glucé kid.

A scheme for the education of the butchers is now in operation in Nigeria and is already responsible for an improvement in the flaying of the skins.

It is proposed to license all butchers and to start a system of inspection of skins at the various places of slaughter throughout the country.

Native inspectors will be appointed who will under the supervision of European inspectors be responsible for the inspection and stamping of skins.

The inspector will stamp each skin with his own particular mark and in addition a mark indicating that the skin shows no knife cuts or disease lesions.

These marked skins will, it is hoped, fetch a higher price in the local markets and by being exported in distinct bales fetch a higher price in the home and foreign markets.

The inspector will also see that the skins are properly dried at the place of slaughter.

It is also proposed that skins are bought by the piece and not as at present by the weight. This will control the fraudulent practice of rubbing dirt into the skin to increase the weight. As a further precautionary measure it is hoped to be able to make it illegal for a butcher or other native to adulterate the skins in this manner. This latter will be controlled at the place of purchase. By the aid of the inspector's own mark some idea of the place of origin of the skin will be given.

The home buyers are keenly enthusiastic in the scheme and are willing to co-operate with the Government in every way possible.

As I have brought out in this paper, it is not always easy for an exporter to detect all blemishes in a sundried skin, more especially when faking has been practised. It is to help him to differentiate between damaged and undamaged skins that the scheme has been evolved as well as to bring home to the butchers actually responsible for the bad flaying and drying, and to the owner of the diseased goats the pecuniary loss occasioned by these faults. The butcher and the goat owner will receive a reduced price for the skin and the live goat respectively.

This is only a very rough outline of a scheme of control which is yet in its infancy and any suggestions or criticisms from the members present will be welcomed.

The glucé kid manufacturer, and he is our chief buyer of goat skins, requires that the skin should conform to the following conditions:—

1. The skin should be of medium size, i.e. from 3 to 5 square feet and of good grain and substance.

2. It should be well flayed and free from all fat.

3. It should be as nearly square in shape as possible (see photos Nos. 2 and 3).

4. It should be dried slowly in the shade and for preference stretched on a frame. But there must be no stretching of the skin in a head to tail direction.

5. It should be free from the lesions of skin disease.
(6) It should be packed flat and not folded.

(7) It should be bought from the native by piece and not by the weight. The best skins weigh on an average about one pound and measure about 4 square feet.

Specimens Nos. 9 and 10 are glacié kid skins of suitable size and shape. Observe the fine even grain.

In comparison compare specimen No. 11. Observe the coarse grain of the skin.

This skin is typical of those that come from the province of Bornu where you get a large goat with longer and coarser hair.

It is now proposed to conduct a cross-breeding experiment with the smaller fine-skinned Sokoto goat and the coarser skinned Bornu goat. The idea being to produce a cross-bred goat whose skin will be of greater market value than the pure Bornu goat.

Skins should be as nearly square as possible in shape and not too large. The value of a glacié kid skin and therefore of a raw skin depends on the number of various patterns which go to the making of a shoe upper that can be cut from a skin.

The various pieces of a shoe upper are shown on specimen No. 12. They consist of golosh, toccap, vamp.

The ideal size and shape of a skin therefore is one that will give these various parts of a shoe without waste.

I regret that I have not been able to give you more detailed information on the points I have mentioned in this paper; but as I have already mentioned the whole question of goat skins and their relation to manufactured glacié kid has only recently engaged the attention of our Department; and again as I have come here direct from a leave of absence in England, I have not had access to the latest information on the subject.

The problem is not one confined solely to Nigeria, and I am sure that in the skin and hide trade of the various African Territories there exists an economic asset well worthy of our attention and endeavours.

I have not touched on the question of hides; but much has been said with regard to bad flaying and drying of skins applies equally to hides.

Skin brands also seriously detract from the value of a hide and they should, as far as possible, not be applied to the skin of the upper parts of the body.

**Paper No. 29.**

**POISONOUS PLANTS IN SOUTH AFRICA HITHERTO UNKNOWN.**

By D. G. Steyn, B.Sc., Dr. Med. Vet., Veterinary Research Officer, Department of Agriculture, Union of South Africa.

The procedure adopted at the Onderstepoort Laboratories by the author in the investigations into the effects of plants on animals consisted in drenching rabbits and our domestic animals with the mined or ground plants, and in subcutaneous injections into guineapigs and rabbits with extracts made from these plants. Mostly the plant material forwarded to the laboratory was too scanty to allow of experiments being carried out with all species of domestic animals.

Whereas the drenching of animals is experimenting with poisonous plants, investigation of all plants. As an example, grass (Cynodon sp.) and other plants containing as a large amount of prussic acid etc., process of mincing.

Our knowledge of the distribution by no means perfect, and I have no doubt this article most probably have a much wider present realized or definitely known, utmost importance that the stage of which the plants were tested, should be the known fact that the toxicity of plants depend, and that some plants do not process of desiccation. It is also of interest in the plants, as certain parts of a plant others may be deadly.

I am indebted to Dr. E. P. Phillips of Plant Industry, Pretoria, for having and to A. O. D. Mogg, M.A., Botanic notes on distribution.

**AMARYLLIDAE.**

A. *Nerine* sp. (probably *N. cautleyana*).

**Synonym:** *Nerine*

**Origin of Material Tested:** - *Pokhara*

**Distribution:** - Talbadh and Wurdlake South Western Cape.

**Stage and State of Plant:** - Maturing fruit; leaves and stems complete dry. The bulbs were planted out and will be made as soon as the flowers appear.

**Symptoms:** - The quantity of the bulbs was allowed of a few rabbits being dosed.

**Bulbs:** - A rabbit dosed with 50 grams of dry leaves and stems showing train of symptoms within three minutes pronounced weakness (paralysis) of the legs unable to hold the head up, marked dyspnoea, subsequently imperceptible pulse. The rabbits after dosage under symptoms probably was due to heart failure.

**Post-mortem Appearance:** - A pale heart markedly dilated and both ventricles, blood masses; and a marked hyperaemia of the right lung.

**Dry Leaves and Stems:** - 50 grams of dry leaves and stems are highly toxic.

**Maturing Seed:** - They resemble the bulbs closely. 25 grams caused death in a couple of days, after the animal had shown signs identical those caused by the bulb. A diarrhoea occurs.

**Post-mortem Appearance:** - In addition, this animal showed a pronounced enteritis.