

Ethnoveterinary Medicine in Ormaland - Kenya

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CHAPTER 5 RESULTS

5.1 Constraints on information gathering during the interviews.

Some of the constraints the author observed include lack of co-operation from the pastoral informants, as they wanted to be paid for the information given. The other major and more sensitive problem was obtaining the secret knowledge from the traditional healers. The healers' insight knowledge was difficult to elicit not only by the author but also by their own people. Although PRA methods were initially applied for the gathering of EVM information, the approach was later on modified to counteract the drawbacks mentioned. These constraints were overcome by adjusting the approach by either giving them examples of EVM projects done in other pastoral areas of Kenya like Maasai, Borana, Samburu and Turkana, or by using visual aids, like coloured photographs of clinical signs of different diseases. The surveyed respondents were excited and more interested when using the 'magic' photographs, which increased their willingness to participate and give more information. These approaches highly contributed to the gathering of ethnoveterinary knowledge in Ormand.

5.2 Survey Results

In this chapter, data collected in the field are presented. The data includes those on traditional animal health treatments and on perceptions of the veterinary services by the herders, and the reason for using and combining traditional and modern veterinary practices. Detailed traditional methods for common livestock diseases found in Ormand are highlighted.

A total of 55 were completed of which 48 came from pastoralists and 7 from veterinarians and animal health assistants. Seven is a very small sample and the result of these samples

must be treated with care. From the questionnaires, information was obtained on 22 animal health conditions and 25 ethnoveterinary medicines. Out of the EVM listed by informants 18 are plant derived and 7 are from other sources.

5.3 Information from Veterinarians and Animal Health Assistants (AHA)

A total of 7 questionnaires were completed of which 2 were filled with veterinarians and 5 with AHA.

Rendering of veterinary services to the Orma and the types of diseases mostly treated

All agreed they do offer their services to Orma pastoralists and have attended cattle, sheep and goats as the mostly treated animals. Chickens and donkeys were mentioned as other animals attended. None mentioned camels.

Frequency of rendering services and means of transport

Five informants (71%) said they treat once a day, while the rest attended once a week. On the question regarding means of transport, 3 (42%) said by foot, 2 (29%) use both car and by foot depending on the distance, while the remaining 2 (29%) said they a bicycle.

Nature of visits by veterinarians

When asked whether they are called by pastoralists or visit them as a routine work they responded as shown in Figure 3 below.

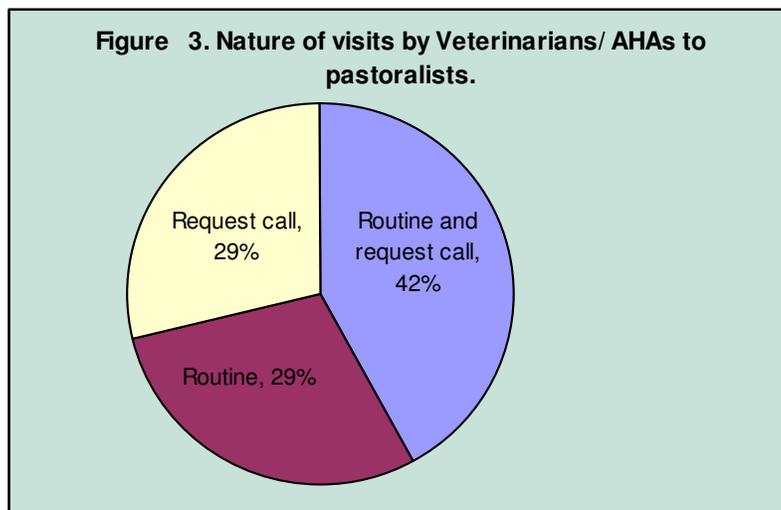


Figure 3. Nature of visits by Veterinarians / AHAs to pastoralists

Extent of charging the farmers for veterinary service rendered.

The result attested that 2 (29%) always charge, while 4 (57%) said they only charge for the drug used and 1 (14%) demanded the fees for both the drugs and services provided.

Factors affecting the efficiency of veterinary service

Problems reducing the efficiency of veterinary services were listed as follows:

- Lack of transport 100% (7)
- Lack of adequate veterinary drugs 100% (7)
- Vastness of the working territory 100% (7)
- Lack of laboratory equipments 14% (1)

Do Ormas treat their own animals?

All informants indicated that Orma treat their own animals and use modern drugs if they do not get veterinary service.

Suggestions on effective use of ethnoveterinary medicine.

When asked about ways in which EVM can be used effectively, the following points were given.

- Creating awareness through organising workshops where the traditional healers, veterinarians and livestock officers are incorporated.
- More research on plants thought to have medicinal properties.
- Identification of toxicity levels and their antidotes.

Constraints working with pastoralists.

The veterinarians and AHA indicated constraints encountered with Ormas when delivering veterinary services as:

- Low adoption rate to new ideas 14% (1)
- Refuse or cannot afford to pay for the drugs used 100% (7)
- Difficulty in understanding the importance of dipping 14% (1).

5.4 Information from pastoralists.

5.4.1 Cattle ownership

Most of the informants were reluctant to answer the question on the number of cattle owned. The figure obtained was not in anyway representative of the actual number in the field and after initial problems the author ignored the question so as to give the interviewees a more relaxed environment and to have full participation in the interview.

5.4.2 The range of common livestock diseases is shown in Figure 4.

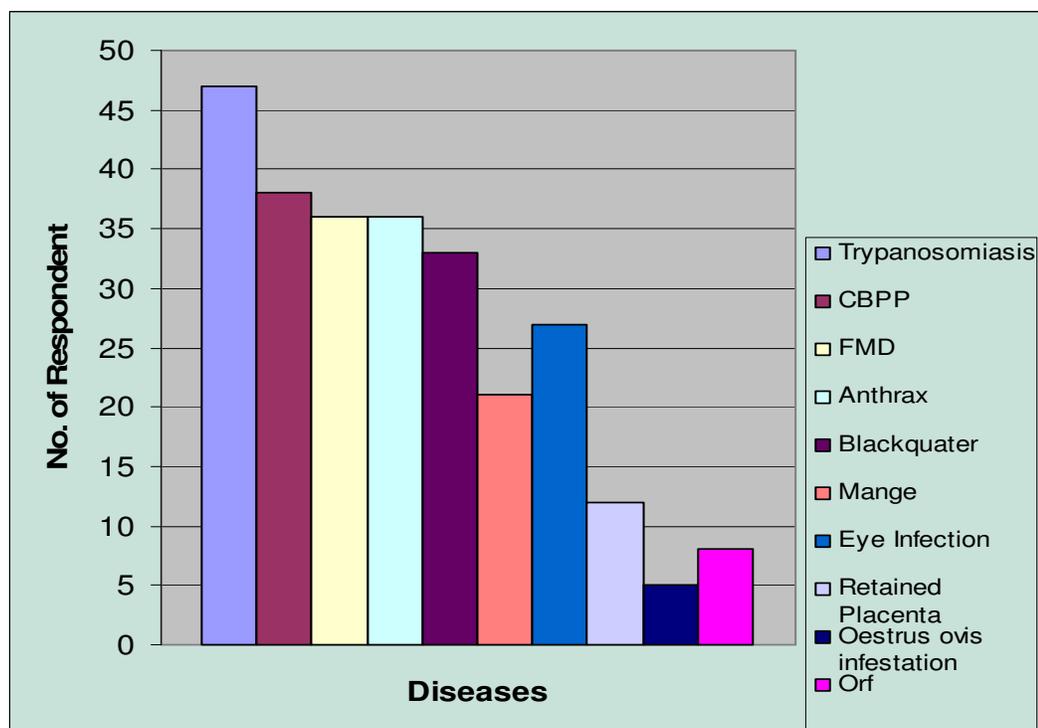


Figure 4. Livestock diseases in Ormaland

5.4.3 Ethnoveterinary treatments by disease / problem

Trypanosomiasis (Gandi)

When asked what traditional treatment they use 9 (20%) mentioned sheep tail fat and 3 (7%) bloodletting. Bloodletting is believed to reduce the 'bad blood' hence lowering the infection rate. Six (13%) indicated using a solution of fish scrapings, 11 (24%) indicated the use of dried roasted coffee berries and 10 (22%) said there is no local remedy for Gandi.

Traditional treatments. A total of 6 different treatments were listed:

1. Sheep tail fat is boiled, cooled and given orally 1-2 glasses, 3 times daily for 3 days.
2. A small arrow is used to puncture the jugular vein, 0.5 - 1.0 litre of blood is drained.
3. *Hargesa* (Aloe - species not available) and salt are mixed with water till the solution changes its original colour. The solution is then drenched.
4. Coffee berries (buna): roasted dry berries are pounded and the powder boiled in water until a dark brown solution is formed. This solution is injected intramuscularly (i/m) 2cc once.
5. Fish wastes/soup: solution from fish scrapings or intestines is made and filtered and then drenched at about 1 litre two times a day till recovery.
6. A sheep's head is boiled, cooled and the soup is given orally. One litre is administered once daily till recovery.

A part from the above treatments against trypanosomiasis the author of this study found that the Orma herders have their own ethnohusbandry practices for controlling trypanosomiasis. These practices include the following:

- During herding the small ruminants flock is allowed to be on the front line followed by the cattle herd. In case of tsetse challenge the small stock are attacked first before the cattle.

- Allowing the animals to go for grazing at late morning when the sun is hot enough to reduce tsetse attack.

Contagious Bovine Pleuropneumonia (CBPP) (*Somba*)

From the figure 5 below it is quite clear that CBPP infected lungs is substantially used among Orma pastoralists for prophylaxis 19 (48%). Twelve (31%) reported the use of coffee berries, but others, 5 (13%), use a solution of coffee berries and novidium for treatment, while a few 3 (8%) indicated there is no local remedy.

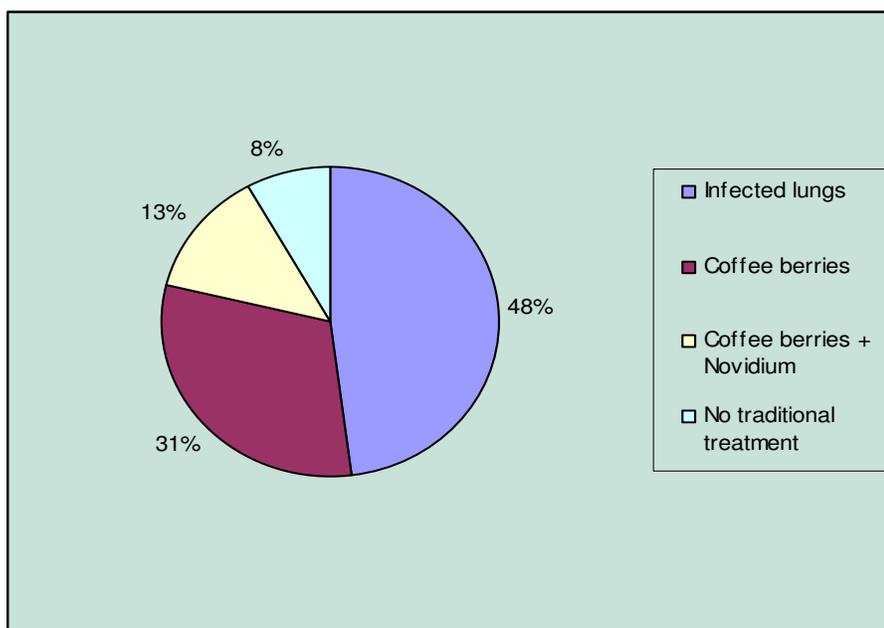


Figure 5. Treatments used for CBPP

Treatment and control of CBPP

1. CBPP infected lung is soaked in water and covered for 3-7 days till fermentation is observed. The solution (2-3cc) is injected into the tail of I/m. alternatively, the lung is put in a polythene bag and buried for 2-4 days then removed and soaked in water for about 15 minutes and the solution is injected as above.

OR

2. CBPP infected lung is cleaned and boiled in water, cooled and the liquid is then injected as above. Where a syringe is not available, a small piece of the lung is inserted under the skin along the nose.
3. Coffee berries are pounded and boiled, cooled and 2-3cc of the solution injected i/m into the healthy animal. A mixture of *buna* and *novidium* is also used.

Foot and Mouth Disease (*Hoyale*)

The disease was listed by 36 (75%) of the total number of herders interviewed and was a serious problem when conducting the study. The traditional treatments are illustrated in Figure 6. Informants who listed FMD often mentioned *Chukurdi*, which is claimed to occur only to those animals recovered from FMD. The milk production completely goes down but the animal appears healthy and if slaughtered the meat is very sweet. The healers claimed to treat² this condition by removing ball-like pieces (cotyledons) of meat from inside the birth canal, which is believed to solve the problem.

Treatments

1. Urine or warm salt water is used to wash the wounds.
2. Quran recitation is performed to either protect from contagious diseases or cure them.
3. Decoction of Hagarso (*Commiphora paolii*) bark is used to wash the hooves only, once daily for 3 days.

² Treatment is done after the animal has calved.

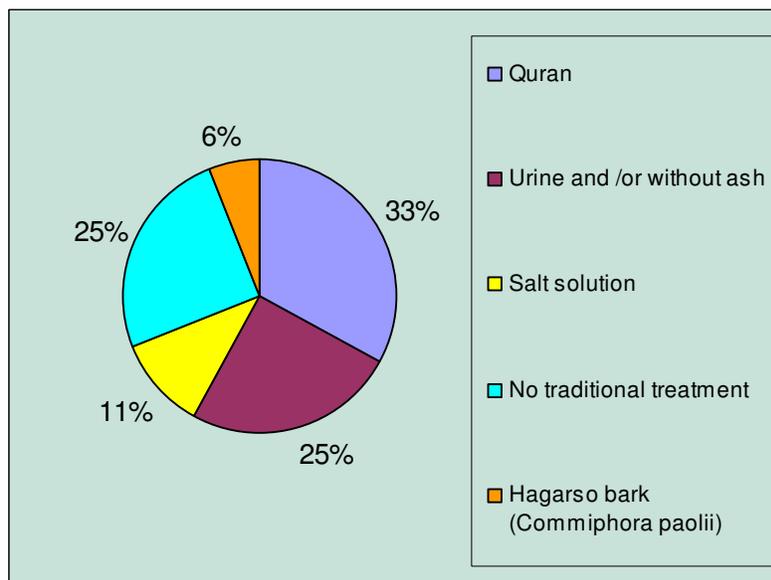


Figure 6. Pastoralists perception of different ethno remedies for FMD

Anthrax (*Bashasha?*)

Thirty-six respondents (75%) of the herders interviewed listed anthrax as among the diseases affecting their livestock. There was confusion concerning the local names for anthrax and blackquarter. However, as for this study, the author after several enquiries opted to use *Bashasha* for anthrax and *chilmale* for blackquarter. But the issue is subject to further investigation. The treatment methods given by the informants were: branding, roots of kukube tari (*Maerua subcordata*), coffee berries and ethnomedical beliefs.

One of the following methods is used.

1. Branding – burning all the joints and lymph nodes using a hot iron rod.
2. Roots of Kukube tari (*Maerua subcordata*) are boiled, cooled and the resultant liquid administered orally. About 2-4 glasses is given twice daily for three days.

3. A Quran recitation is performed in the animal *boma* with a bowl of water. This ‘holy water’ is then used to sprinkle the animals, preventing them from contracting the disease.
4. Four legs are collected from an animal that has died from the disease and are tied together with Soso³ (Kibuyu brush) and *Korasoma*⁴ (Kibuyu stick). These are hung in the cattle *boma* for one year protecting the herd from anthrax.

Blackquarter (*chilmale?*)

Thirty-four (62%) of informations listed blackquarter as among the diseases affecting their animals. Different treatments for blackquarter are given in Fig. 7.

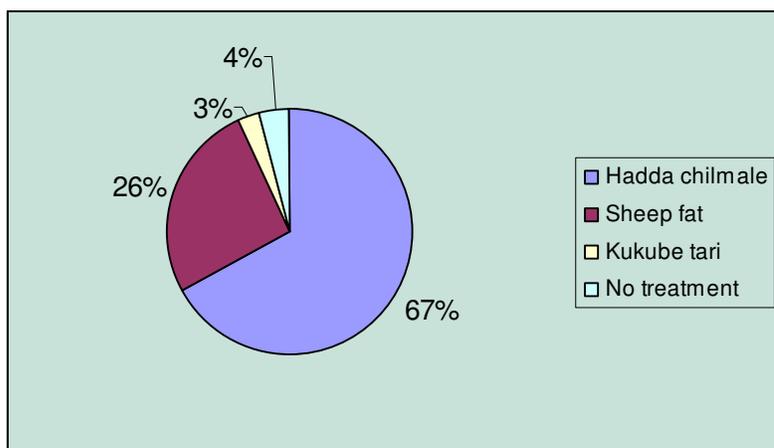


Figure 7. Responses for treatment of Blackquarter

From the above results presented in Figure 7, it is clear that Middanqajibu (*Momordica spinosa*) or Kate (*Cadaba farinosa?*) are commonly used plants for cattle affected with blackquarter. A substantial number of the

³ A traditional brush made from bark peelings used for cleaning milk container.

⁴ A wooden stick used for scratching the dirt from the milk container.

herders also listed sheep fat as the remedy. The interviewees claimed that they do not seek any government veterinary assistance for treatment of blackquarter. One informant said:

“we have our own effective remedy why should we go to a government veterinary office?”

For blackquarter treatment Orma use one of the following methods of treatment.

1. Roots of ‘chilmale’ plants (*Middanqajibu- Momordica spinosa or kate-premna resinosa*) are boiled and the decoction given orally about 1 litre, 3 times daily for three days.

OR

2. Leaves of ‘chilmale’ plants are mixed with 1 litre of water and squeezed till the water turns green. The infusion is then given as a drench, 1 litre twice per day for 1 week.

Mange (*duna*)

A total of 21 (44%) informants out of 48 mentioned mange.

The informants gave 5 different ethnoveterinary treatments that are listed below.

Treatments

1. *Dende (Dobera loranthifolia)* bark is burnt and the ash is mixed with water just to make it porridge-like and left overnight before applying to the affected part.
2. *Dende (Dobera loranthifolia)* and *Gurte (Salsola dendroides)* are burnt and the ash is made into a porridge-like solution and smeared topically.

3. Simsim oil is used to smear the affected part of the skin.
4. Old engine oil is applied on the skin.

Note: The affected skin should be scraped using a dry shell before applying any of the above methods.

Eye infection (*Dukub illa*)

Of the total respondents 27 (56%) mentioned eye infection as a problem of concern.

Traditional remedies for ophthalmic problems are widely used among Orma herders. There are five different ethnotherapies for treating eye problems. Their analytical breakdown is seen in Figure 8 below.

Treatments

1. *Mader* bark is chewed and then spat into both eyes once for three days.
2. Salt and traditional butter is mixed and the 'cream' is applied directly in the both eyes twice daily for 5 days.
3. Tobacco is chewed and spat into both eyes once a day for 3 days.
4. Branding using red-hot iron is done just above the eyes.
5. *Hargesa (Debra glabra)* latex is applied in both eyes once daily for three days.

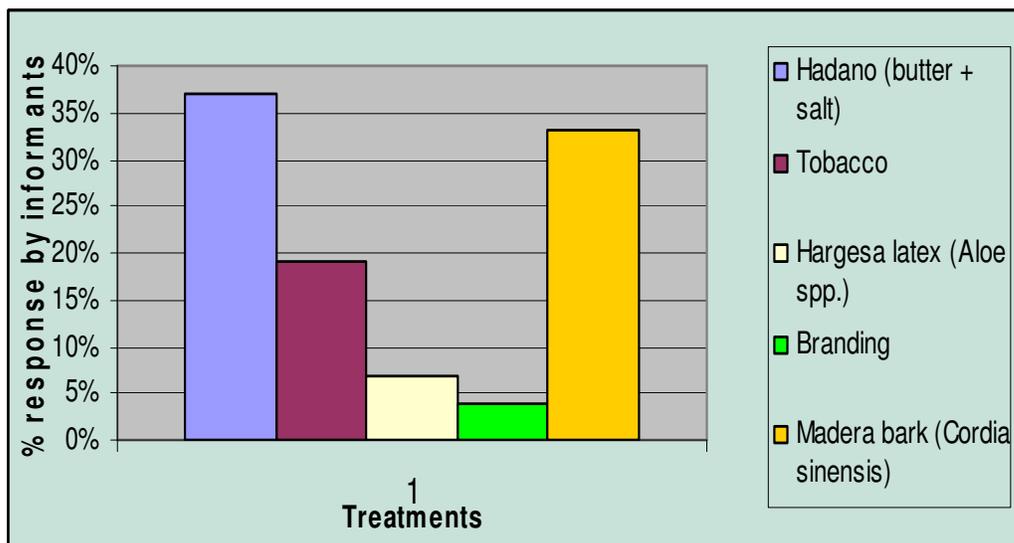


Figure 8. Use of different eye treatments by informants.

Retained placenta (*Dukub dillu*)

Twenty one (43%) of informants mentioned retained placenta as one of the conditions affecting their herds. There were only two types of remedies used. The majority (62%) opted for salt solution while the rest (38%) listed Garas leaves (*Debra glabra*).

Treatments

1. A salt solution is made by mixing 1 glass of salt to 4 glasses of water. The brine is then drenched into the animal affected with the retained placenta. About 1-2 glasses twice a day for 3-7 days.

2. An infusion of *Dende* (*Dobera loranthifolia*) leaves is given orally, about 2 glasses twice a day for 1 week.

Oestrus ovis infestation (*Sharaqito*)

On the total number who responded 5 (4%) indicated *Oestrus ovis* infestation as a problem. Four (80%) opted for the use of tobacco while the remaining informants mentioned sheep urine.

Treatments

1. A pinch of tobacco snuff is administered through the nose (intranasally) once daily for three days. One informant said the animal will start sneezing immediately it is given the snuff and it hardly takes more than 3 days for the *Sharaqito* (*Oestrus Ovis*fly) to be sneezed out.
2. Sheep urine is stored in a container and left overnight and then is poured into the nostril (intra-nasal administration). This remedy is given once daily for 3 days.

Orf (*Aftara*)

Eight respondents (17%) mentioned Orf among the diseases encountered in Ormaland.

Treatment

1. Branding around the mouth

Fractures

Most informants said fractures can occur at any time affecting any animal (sheep, goat and cattle) and involves any limb.

Two types of fractures were identified: Single and multiple fractures.

The bones may crack lengthways, or across or diagonally. These cracks can either involve one breakage or several and are referred to as single and multiple fractures respectively.

Single fractures involving a long bone below the elbow can easily be affixed. However, they indicated that it is difficult to treat multiple fractures and mostly the animal is recommended for slaughter.

Procedure for fixing Fractures

- Injured part is palpated to find out if is single or multiple fracture. If fracture can be fixed:
- Straighten the limbs by massaging the area with warm water and apply *hadano* (butter) when fixing the bones in place.
- Wrap a piece of cloth or wet hide to hold the fixed bones in position.
- Reinforce by tightening either side of the broken limb with an arm's length of tree bark.

- Finally, wrap tightly using another piece of cloth over the barks.
- Check the healing process after 10 days. If it shows signs of sealing then leave it for 2-3 weeks before removing the wrappers.

Calf rejection

Five (10%) of the informants surveyed mentioned this problem. The roots of Kalkacha hare (*Cadaba farinosa*) are chewed and milk from all quarters of the dam to adopt the calf is added to the mouth and spat into the cow's birth canal. The cow is said to accept the calf within two hours.

Mastitis

Although milk is important among the Ormas, only 8 (17%) of the informants listed mastitis as one of the disease problems affecting their herd.

Treatment

Warm ash from burning *Mader* (*Cordia sinensis*) twig is collected in a pot and is placed under the udder. A stripping of milk from each quarter is added into the pot containing the ash and the dust created rises into the udder. Then paste from milk and ash is smeared onto the affected quarters.

Uterine prolapse

Of the informants interviewed 10 (21%) listed uterine prolapse among the animal health conditions affecting the Orma herd.

Treatment

The uterus is washed with clean water and butter (hadano) is applied. The uterus is gently pushed inside the birth canal. The uterus is likely to fall out, but the Orma herders use one of the following methods to hold the uterus in position.

1. Y- shaped twig is placed at the vulva lips and tied with a rope while leaving a small opening only enough to allow urine to pass through, but preventing the uterus falling out.
2. The other method involves tying the tail tightly with a rope from the head to the switch. This method is claimed to be simple and effective.

Note: After the operation the animal is guarded not to lie down for 12 hrs to avoid the uterus wall coming out.

Calf pneumonia (Ilkoti)

Of the total interviewers, only 2 (4%) mentioned calf pneumonia. The two gave the same plant *Karchacha* roots for treating the disease.

Treatment

Karchacha (not available) fruits are ground and boiled. The decoction is drenched to the affected animal. About 1 glass is given twice daily for 7 days.

Lumpy skin (*Gofu*)

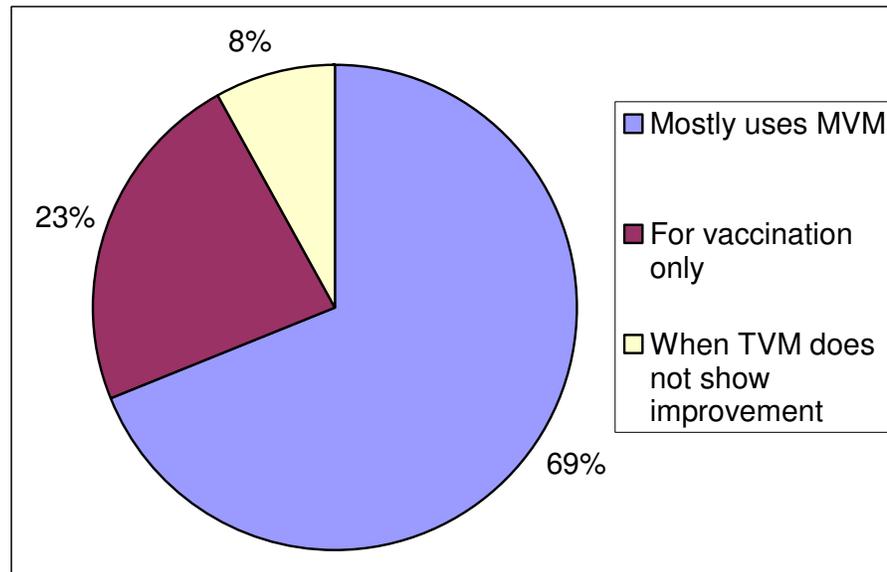
Of the 48 informants interviewed only 2 (4%) mentioned lumpy skin disease. This animal health problem seems not very important to Orma cattle.

Treatments

1. Wash the affected skin with salt water and smear with brake oil.
2. A full cup of latex is collected from *Hadama* (*Euphobia robecchii*) leaves mixed with fats and applied topically once a day till recovery.
3. A drop of paraffin is injected into each lump.

5.4.4 Extent of using Modern Veterinary Medicine (MVM)

On the extent of using MVM (Figure 9 below), the results clearly show that the majority of the herders frequently use MVM. Lack of faith and knowledge of Traditional veterinary medicine (TVM) were given as the main reason.



5.4.5 Reasons for combining Modern and Traditional Veterinary Medicine (EVM).

When asked why they combine MVM and EVM in treating their animals the informants listed the following reasons.

In some cases modern medicine is not effective. An example given was of dystocia and fractures. They therefore opted for traditional rather than modern methods. However, modern medicines like trypanocides were said to be more effective as compared to those used in traditional practices. Other reasons include the unavailability and high cost of modern drugs, which make them resort to EVM.

5.4.6 Extent of visits by government veterinary staff

The answers by informants as to whether government veterinary offices visit them to treat their animals are presented (Figure 10).

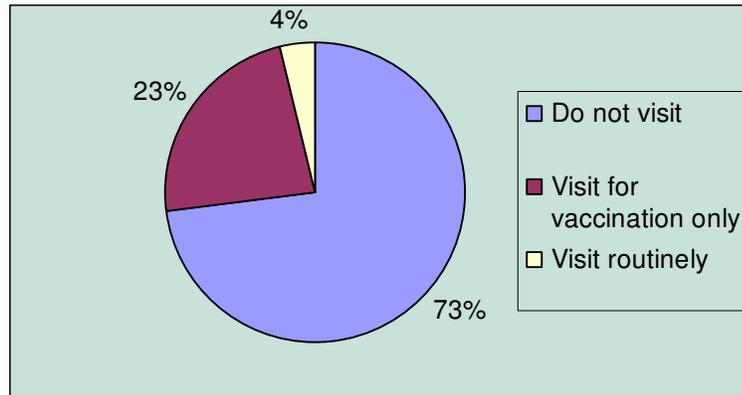


Fig 10 Visits by the government veterinary staff

5.4.7 Extent of having traditional healers (*daktaris*) in Orma community.

When asked whether they had traditional healers, the majority 34 (71%) responded in the affirmative, while the rest either did not know or had none. The informants who had local *daktaris* were further asked to indicate if they had ever taken their animals to traditional healers. Thirty one (65%) confirmed they had while the rest had not. The interviewees mentioned cases where their animals were treated by traditional healers (Figure 11).

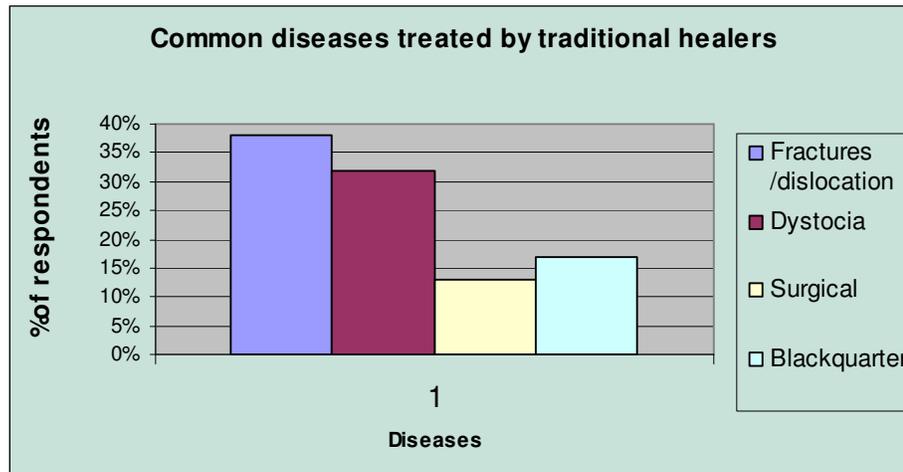


Figure 11. Diseases most frequently treated by traditional healers

5.4.8 Constraints encountered with government veterinary officers.

The herders answered the following as problems encountered with the government veterinary services.

- In most cases they do not show up when called.
- The service is expensive as we pay for the drugs, fuel and even their lunch.
- When reporting a case in the office they tell us to take the sick animal all the way to their office.
- Some staffs are inexperienced and cannot help.
- No assistance from the veterinary services apart from vaccination campaigns.
- Lack of quarantine imposition due to corruption of the county council staff and veterinary office.



Fig. 12 Medicinal herbs on sale at corridor shop at Garven



Fig. 13 Cauterisation is one of EVM methods used in Ormaland.

Fig. 14 Some medicinal plants used in Ormaland.

