The Importance of Traditional Veterinary Medicine (TVM) in Animal Health Programmes

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Abstract

This paper briefly discusses Fulani attitudes to animal disease, describes some of their traditional veterinary practices and treatments for common diseases,and argues the importance of involving herders with their knowledge of local herbs and husbandry practices in draught animal programmes.

Introduction

This paper concentrates on tropical veterinary medicine methods used by the Fulani people in Sierra Leone. The Fulani concept of animal diseases and treatments at times closely parallels that of western veterinary medicine. In terms of the taxonomy of diseases they recognise a difference between external and internal problems, fatal and non-fatal diseases, calves and adult diseases and organic and supernatural diseases. In terms of nosology certain categories or illnesses are precisely differentiated like brucellosis, scabies, wounds etc. whilst others are very broad such as worms and diarrhoea - there is little differentiation between the different types of worms and no distinction between diarrhoea caused by worms or young grass. The name of an illness may also reflect an association like 'Heire' (liver) for liver fluke or 'Chonchi jijan' (blood) for red water, or with its effect like 'Haiku' (loss) for abortion, 'Uppu redu' (swollen stomach) for bloat and 'Koingel' (leg) for black leg/quarter.

In their treatments of diseases also they have a grasp of many concepts which are recognised by western veterinarians as essential for disease control - prophylactic treatments, drenching, administering of mineral lick, toxic plants, vector control (e.g. of ticks), epidemiology of diseases (stomoxys fly and bloating periods), the symptoms of herds, e.g. isolation being a sign of a diseased animal.

The implication of these findings for research and development is that the traditional herders should be involved in any animal health research programme and that for expansion of any draught animal programme the knowledge and practices of the herders should be incorporated into that programme. As shown below the herders possess an invaluable knowledge of herbs and husbandry practices which are relevant and practical within the farming systems of Sierra Leone. These become compelling when it is recognised that due to problems of foreign exchange the veterinary service is handicapped by lack of logistics, drugs and storage facilities. To ensure adequate coverage however, it is necessary to identify the herbs in the different vernacular languages so that ox-handlers can identify and use the herbs recommended. What follows is a description of some of the common diseases affecting work oxen in Sierra Leone and the traditional methods of coping with them.

1. **Stomoxys fly**

Period of attack:	August to September. Attacks mainly sick and wounded also tied animals.
Cause:	Uncleaned dung in paddock and rotten vegetables/grass around paddock provide place for laying of eggs.
Effect:	Disturbs feeding and sucks the blood of the oxen leading to wasting, anaemia and death.

Treatments:

a) Rub oil from fruits of *Carapa procera* on the animal twice a week especially on wounds.

b) Rub palm oil mixed with any bitter tablet and salt on the oxen. Convince farmers that though palm oil might be expensive yet compared to the value of their oxen the cost is very small and in any

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case 3–4 pints would do for the whole fly season.

c) Rub used engine oil over the animal's body.

d) As prevention clean paddock everyday and dung deposited in a hole to make compost.
Secondly, clear brushed grass away from the paddock and bury with dung to make compost which can be used as fertiliser.
Do not use the fly chemical on an animal that is under severe attack from the flies because it will kill the animal.

2. **Ticks**

Period: Mainly during the rainy season and early dry season

Cause: Grazing in tall grass

Effect: Cause diseases which, combined with poor nutrition during the late season and stress at the start of the rainy season when oxen are put to work, may lead to death.

Treatments

a) *Carapa procera* oil as for stomoxys fly can be used to take care of ticks.

b) Kerosene mixed with salt can also be used but this has an adverse effect on the skin and so should not be used very often.

c) A much more effective and cost-free method is to cast the oxen and pierce the ticks with sharp objects like needles or the thorns of the orange tree. Do not forcibly remove them by hand as this will leave sores which invite flies that will infect the animal or suck the its blood. After piercing the ticks, leave them hanging for they will fall off in 2 or 3 days.

Prevention: Avoid grazing in tall grass or returning oxen to worreh (cattle ranch) after the ploughing season.

3. **Bees**

Period: Dry season during honey-tapping season.

Cause: Disturbance of beehives by honey-tappers.

Effects: Sting animals, disturb feed and kill the oxen. Tethered oxen cannot escape from them.

Treatment

Make mounds of hay (dry grass) in four or five spots, put some dry dung on top of them and light the hay. The combination of thick smoke and the smell will drive bees away quickly. Report the incident to a vet if they have attacked the oxen for long time.

4. **Footrot**

Period: Rainy season

Cause: Muddy paddock, grazing and working in swamps

Effect: Limping and reduced efficiency in work output.

Treatment:

Prevention is better than cure because resting the animal in a dry area for a week may help but valuable working days will have been lost. Paddocks should be constructed in a gravelly area, with a drainage channel dug around them. Shelter a portion of the paddock against rain and try not to graze the oxen in swamps after working in swamps. Palm oil mixed with salt helps in minor cases of footrot.

5. **Leeches**

Effect: Discomfort to both animal and man. Often the only productive swamp in a village may have leeches which prevent people from working in it.

Treatment

Since leeches' skins are sensitive to acid the leaves of *Hymenocarda acidia* should be pounded and scattered in the swamp or limes split in two should be scattered in the swamps a week before ploughing.

6. **Wounds and Abscesses**

Effect: These cause pain and discomfort and attract flies which can infect them. Together these will prevent work and so the animals need to be observed keenly for signs of limping or stubbornness.

Treatments

Wounds should be cleaned and palm oil or *Carapa procera* oil or BHC (if wound has worms) or tetracycline powder applied till the wound heals up. But BHC powder should be washed off 2 days after application. Any abscess should be inspected and foreign bodies removed if present, the abscess squeezed till all the pus has been removed and any of the remedies for wounds applied to the opening.

If possible consult a veterinarian to administer an antibiotic treatment.

7. **Worms**

Symptoms: Poor grazing, wasting, rough hair at top of the neck of the animal.

Effect: Anaemia, loss of weight, diarrhoea and possibly death. This can discourage farmers especially if they cannot eat the meat (Muslims reject animals as unfit for slaughter if unclean).

Treatment

The roots of *Aframomum cuspidatum* have been shown to be very effective. A generous handful of the roots should be roasted, beaten to pulp, boiled in water, 3 limes and some salt added and sieved before giving one '3 pence pan' of it to the animal. If repeated twice a month this will help greatly to reduce worms in the oxen.

8. **Diarrhoea**

Cause: This is the next in importance to worms in affecting work oxen and may be caused by worms or eating of young grass at the start of the rains and so the above treatment for worms should be given if worms are suspected.

Treatments

Baissea candiloba leaves should be pounded in a mortar, salt and water added and given to the animal to drink. Alternatively, *Phyllantus discoideus* leaves can be pounded with *Baissea candiloba* and administered to the animal twice a day.

9. **Constipation**

Treatments

To relieve it raw paw-paw fruit should be boiled, salt added and given to the ox or the leaves of 'Dembaui fidda' (the Mandingo name of a leaf not yet classified) could be pounded thoroughly, immersed in salt and water and given to the ox.

10. **Liver Fluke**

Cause: Flukes attacking liver

Prevention. No effective local cure available but prevention helps. Drain all stagnant water in the paddock and avoid grazing snail infested swamps. Also if ducks are available put them in the swamps to eat up the snails. Eventually the problem will be solved.

11. **Bloat**

Cause: This can be caused by the eating of young grass at the start of the rains or eating too much potato leaf or swallowing potato or cassava tubers but the main cause in villages is the picking of young unripe mangoes from trees.

Treatments

a) If the latter, peel the stock of a banana tree till the soft part is reached (or use siphon tubing such as is used for pouring petrol from containers), open the mouth of the ox and gently push the mango or tubers down the throat with the banana stalk or tube.

b) If it is caused by eating young grass or potato leaves pour a pint of vegetable oil like palm or groundnut oil down its throat. To avoid bloat caused by mangoes advise farmers to avoid tethering or grazing oxen in areas with short mango trees or to cut branches that could be reached by oxen if they have no other trees to tie the oxen to.

12. **Eye Problems**

Treatments

Running eyes or eyes with small worms should be treated by casting the animal and the juice extracted from pounding the leaves of 'bush banana' *(Uvaria-chamae)* dropped in the eye daily till it heals up. Because the treatment is painful, make sure the animal is securely cast.

13. **Dangerous litter**

Advise farmers not to leave around empty polythene bags which have been used to carry salt or palm oil, or pieces of cloth with sweat or salt, where oxen can eat them, because of the salt in them. These cause diarrhoea and may also become entangled in the animal's intestines, eventually leading to death.

Conclusion

It is essential to appreciate that the ethnomedicine and ethnopharmacology practised in many developing countries often provide the most (often, indeed, the only) cost-effective methods of obtaining effective remedies and adequate health coverage.

Since this study was started in 1983, more evidence has come to light showing that many of the herbal remedies and traditional practices can be effectively used either as prophylactic treatments or as cures, whilst some of the traditional animal husbandry practices have profound implications for the future of the promotion of work oxen in Sierra Leone.

Résumé

Cette étude examine succinctement le comportement des Peuls face aux maladies des animaux, décrit certaines de leurs pratiques vétérinaires traditionnelles ainsi que les traitements qu'ils utilisent pour guérir les maladies les plus courantes, et fait valoir l'importance d'associer les bouviers et leurs connaissances des plantes et des pratiques locales d'élevage aux programmes de culture attelée.