

Annex: Drugs, dosage and administration

1. TRYPANOSOMOSIS

A. Drugs for treatment

In West Africa, two components are currently used:

Component	Commercial name	Effect
Isometamidium chloride	Trypamidium-Samorin, Veridium	Curative - Preventive
Diminazene aceturate	Berenil, Dophanil, Veriben	Curative

Note: it is recommended to use Berenil for curative treatment and Trypamidium for prevention (see chemoprophylaxis of exotic breeds and crosses)

B. Curative doses for small ruminants (per kg live weight)

Commercial name	Dose
Trypamidium or Samorin	0.5 mg per kg
Berenil	7 mg per kg

C. Chemoprophylaxis for Sahelians and crosses

Commercial name	Dose	Frequency
Trypamidium or Samorin	1 mg per kg	Every 2-4 months

D. Treatment

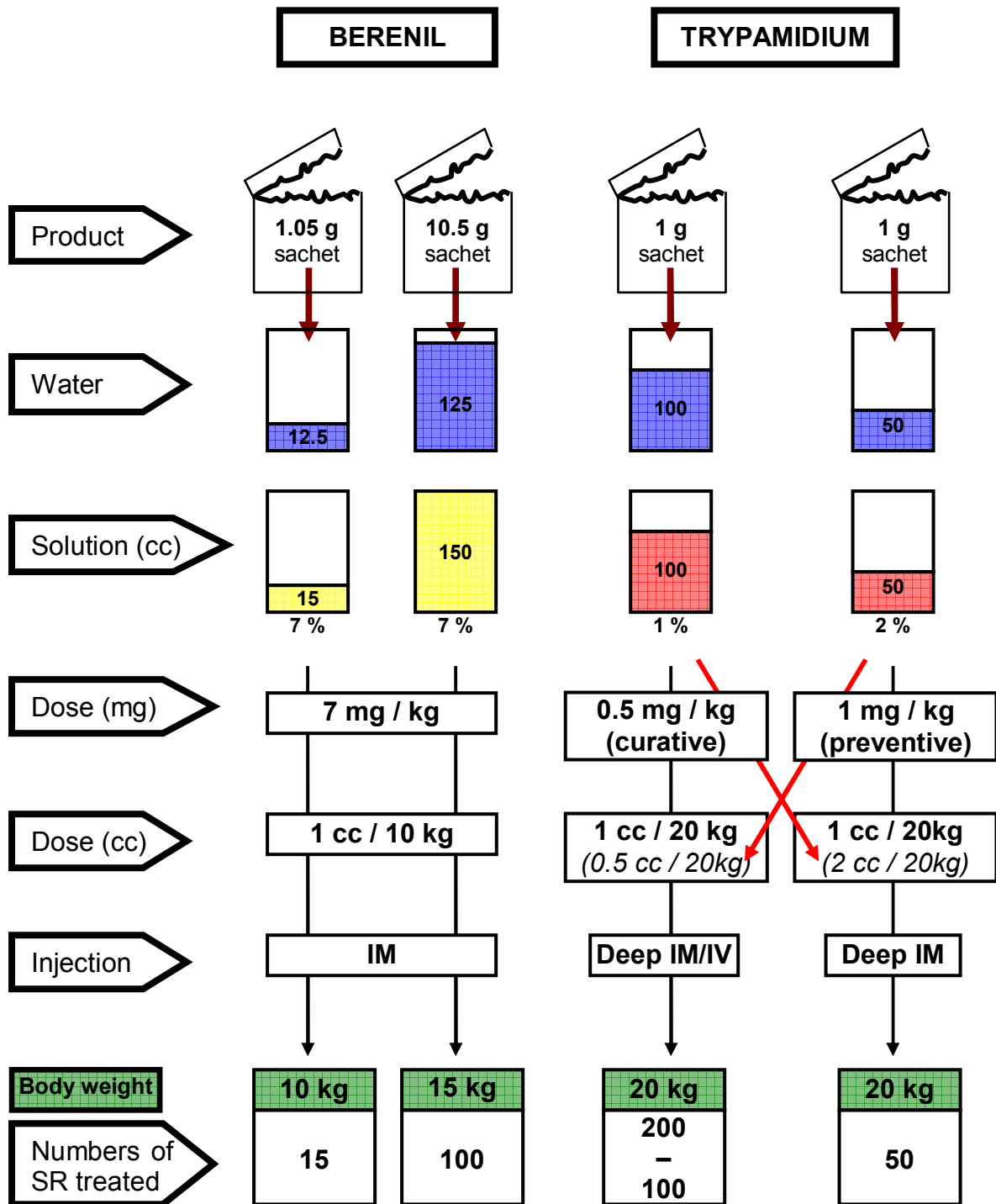
So far, there are no reports of development of drug resistance to diminazene aceturate and isometamidium in The Gambia. In order to avoid the development of resistance of the trypanosomes to current drugs, and to have maximum efficacy of the treatment, it is important to follow carefully the guidelines for the use of these drugs.

- Prepare the drug dilution according to the guidelines on sachets (see next page)
- Use clean water to make dilution. If no sterile water is available, boil water, but let it cool before using it for dilution
- Weigh the animals or at least have a good estimation of the weight
- Use dilution that same day; only if stored at 4-8 degrees the dilution can be kept for 2 days
- Inject properly: intramuscular (IM) or intravenous (IV), see next page

Because of the trypanotolerance of the Gambian dwarf breeds, treatment (with diminazene aceturate) should only be done in the following cases:

Pregnant	When diagnosed infected (regardless PCV)
Lactating	When diagnosed positive and PCV lower than 20
Other	When PCV below 15 When severe clinically sick even if PCV higher than 15

This table can be used for obtaining a correct dilution:
(From Diall, 1997)



NOTE: Trypamidium can also be sold in sachets of 125 mg (=0.125 g). Dilute this sachet in 12.5 ml (for curative effect) or in 6.25 ml (for preventive effect). You will also obtain a dose of 1 and 2 % solution respectively.

2. HELMINTHOSIS (WORMS)

HOW TO DE-WORM?

IMPORTANT: These dose rates are indicative and users will always find the direction of use of the drugs in the leaflets that accompany the drugs

I. Prophylactic treatment of target animals

A. Kids and lambs in first rainy season (first contact with worms)

- Treatment against Nematodes and Cestodes recommended
- Use broad spectrum anthelmintics, such as benzimidazole derivates
- Oral administration of solution

Oxfendazole (Synanthic[®])	10 mg/kg bodyweight (BW)
Fenbendazole (Panacur[®])	10 mg/kg BW
Albendazole (Albenol[®])	3.8 mg/kg BW

- Kids or lambs born during the rainy season, should be de-wormed for the first time at the age of **6 weeks**

B. Pregnant and lactating sheep and goats; Sahelian breeds

- Benzimidazole derivates and ivermectin are safe for this category of animals
- Avermectine and Doramectine should be administered by subcutaneous injection and have the advantage that they are also effective against ectoparasites such as lice and mites.
- Alternation of drugs is possible

	Sheep	Goats
Benzimidazoles		
Oxfendazole (Synanthic[®])	5.0 mg/kg BW	10 mg/kg BW
Fenbendazole (Panacur[®])	5.0 mg/kg BW	10 mg/kg BW
Albendazole (Albenol[®])	3.8 mg/kg BW	7.6 mg/kg BW
Avermectines		
Ivermectine (Ivomec[®])	0.2 mg/kg BW	
Doracmectin (Dectomax[®])	(= 1ml/ 50 kg BW)	

II. Curative treatment of all animals

C. Clinical cases

- Every clinical case of helminthosis observed in small ruminants should be treated following the same guidelines for drugs and dose rates as for section B.
- Degree of anaemia can be determined by using the FAMACHA © (FAffa Malan CHart – Bath, Malan & Van Wyk, 1997) system for goats and sheep. It is an easy method for diagnosis of heavy parasitic infection. FAMACHA © involves a comparison of the colour of the ocular mucous membrane of the animal to a colour chart that categorizes animals into one of five colour categories ranging from 1 (healthy) to 5 (severely anaemic). Each conjunctiva is coloured a different shade of red or pink, respectively, corresponding to 30, 25, 20, 15 and 10 % packed cell volume (PCV). Next to each drawing is a band of colour, corresponding to the predominant colour of the mucous membrane on the inside of the lower eyelid. In addition, the chart is supplied with symbols to indicate for each category the haematological state of the animal and whether or not drenching is advisable.

3. TREATMENT AGAINST TICKS

- **Pour-on:** Ready to use

Drug	Dosage
Bayticol ® (1 % flumethrin)	1 ml per 10 kg bodyweight

- **Spray:** Add the product (acaricide) to an amount of water that is written on the bottle (dilution) and use it

Drug (acaricide)	amount	water
Taktic ® Intervet	4 ml	1 litre
Cypermethrin (30 % EC)	0.25 ml	1 litre
Bayticol ® (6 % flumethrin)	1.1 ml	1 litre

4. TREATMENT OF COWDRIOSIS

Oxytetracycline (IM or IV)	
Early treatment	5-10 mg/kg BW
Clinically sick	10-20 mg/kg BW

(IM=intramuscular; IV=intravenous)

5. TREATMENT OF COCCIDIOSIS

Administration: PER OS	Sheep	Goats
Sulamides (e.g. sulfadimethoxine)	50-75 mg/kg BW for 4-5 days	
Amprolium	10 mg/kg BW for 5 days (20 mg/kg if severe)	20 mg/kg BW for 5 days
Chloroquine	15 mg/kg BW for 5 days (give half of dose in morning and other half in evening)	

6. TREATMENT OF FOOT ROT

	Dose
Penicillin Duration: 3 days	50,000 - 75,000 UI per kg BW
Dihydrostreptomycin Duration: 5 days	50 – 70 mg per kg

7. PASTEURELLOSIS

Different antibiotics can be used against pasteurellosis: Oxytetracyclines, Chloramphenicol, sulfamides at the manufacture's recommended dose or by doubling this dose in severe cases