

TARGETED SELECTIVE TREATMENT OF SHEEP USING THE FIVE POINT CHECK ©

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Although the principle of Target Selective Treatment (TST) has become accepted as a valuable tool in reducing the speed of onset of anthelmintic resistance (AR), and a key part of sustainable and holistic integrated management of parasites (SHIMP), the only practical and proven on-farm method developed to date has been the FAMACHA© system of clinical anaemia evaluation. This by its nature is limited to use in the few haematophagous parasites that cause anaemia, especially *Haemonchus contortus*.

The principle of TST can be extended for use against other important internal parasites, provided that the system developed is practical, economical and reasonably indicative of some form of important parasitism. The candidates for an extended TST system have included nasal discharge (for botfly larvae), ocular mucous membranes for anaemia (for haematophagous worms), submandibular oedema or bottle jaw (for haematophagous worms and conical fluke), body condition score (for worms causing loss of condition) and faecal fouling or dag score (for worms causing diarrhoea). Each of these checks have their limitations and problems but for the present they are the only practical ways of deciding which animals will benefit from treatment during routine inspection on the farm.

A practical, farmer- friendly guide has been developed to enable users to examine sheep (or goats) rapidly, make effective assessments, identify the likely parasites, identify anthelmintic groups that could be used, use practical systems for temporarily identifying treated animals and to know the limitations of the system. The system has been called the Five Point Check (5•V©) for international, multilingual use and constitutes a further, practical extension of TST. This can make a useful contribution to SHIMP. The new system can be summarised in the slogan "LEAVE THE BEST and TREAT THE REST" and has an important shift in emphasis from identifying animals that need treatment to identifying those that are unlikely to benefit from treatment. Rather than dosing all animals, we advocate "LOOK BEFORE YOU TREAT".

Fig 1: The five Point Check

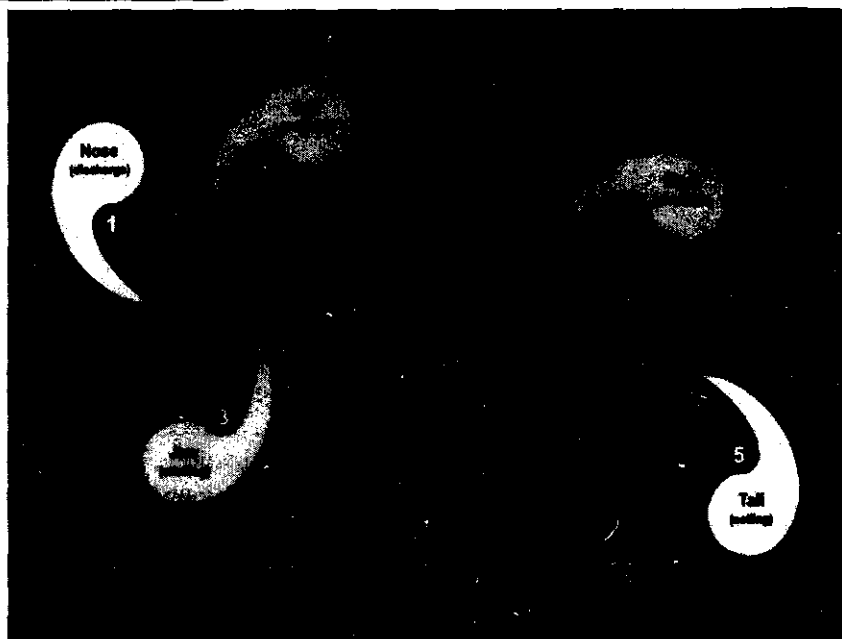


Fig 2: Identification system

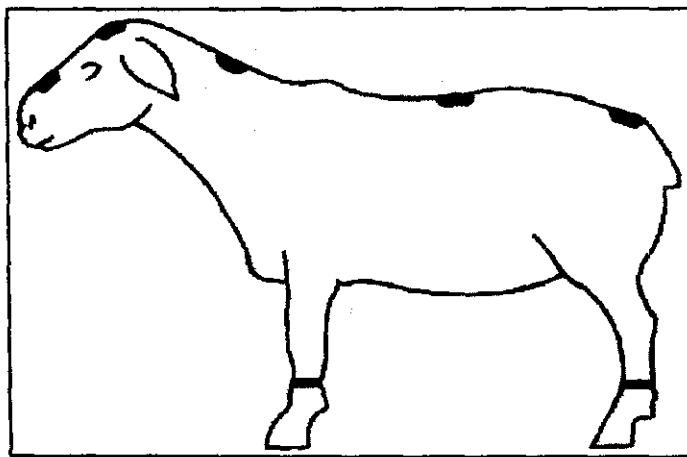


Table 1: Probable causes



THE FIVE POINT CHECK - OBSERVATIONS AND LIKELIHOODS

CHECK POINT	OBSERVATION	POSSIBILITIES
1. NOSE	Discharge 1 - 5	Nasal Botfly Lungworms Pneumonia Other diseases
2. EYE	Anaemia 1 - 5 (FAMACHA® card)	Wireworm Liver fluke Hook worms Conical fluke Other diseases
3. JAW	Soft swelling 1 - 5	Wireworm Liver fluke Hook worms Conical fluke Other worms Other diseases
4. BACK	Condition score 1 - 5 (BCS card)	Brown Stomach worm Bankrupt worm Longnecked Bankrupt worm Nodular worm Other worms Other diseases Tapeworms?
5. TAIL	Soiling 1 - 5 (Dag score card)	Bankrupt worm Conical fluke Brown Stomach worm Nodular worm Other worms Other diseases

Note that the list of possibilities is largely confined to internal parasites, although the causes may be much more diverse. © Copyright on all material

Table 2: Possible treatments



THE FIVE POINT CHECK – ANTHELMINTIC EFFICACY GUIDE (2009)

Worms	Groups of Anthelmintic drugs and Group number (South Africa)							
	① Macrocyclic Lactones	② Benzimidazoles	③ Imidazoles	④ Salicylanilides	⑤ Nitrophenols	⑥ Sulphonamides	⑦ Organophosphors	⑧ Isoquinolones
Wireworm	✓	✓	✓	✓	✓	x	✓	x
Hook worms	✓	✓	✓	✓	✓	x	x	x
Brown Stomach worm	✓	✓	✓	x	x	x	x	x
Bankrupt worm	✓	✓	✓	x	x	x	x	x
Longnecked Bankrupt worm	✓	✓	✓	x	x	x	x	x
White Bankrupt worm	(✓)	(✓)	x	x	x	x	x	x
Nodular worm	✓	✓	✓	x	x	x	x	x
Lung worms	✓	✓	(✓)	x	x	x	x	x
Other round worms	✓	✓	✓	x	x	x	x	x
Conical Fluke	x	x	x	(✓)	x	x	x	x
Liver Fluke	x	(✓)	x	✓	✓	✓	x	x
Tapeworms	x	(✓)	x	(✓)	x	x	x	✓
Nasal bots	✓	x	x	✓	✓	x	✓	x

✓ = generally effective (✓) = some efficacy x = ineffective © Copyright on all material

Note:

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2. Resistance to anthelmintics may be found against any of the drug groups, in any of the worm species
3. Efficacy of an individual anthelmintic must be checked on the label
4. Use a Faecal Egg Count Reduction Test (FECRT) to assess result

Important notice

The tabulated guidelines on the efficacy of various groups of drugs are generalisations and approximations only. The registered list of efficacies against susceptible strains of the parasites that appears on labels must be consulted and these are the definitive indicator of the individual product's usefulness. The table is therefore only a guide to assist farmers to identify which drug groups are most likely to be useful given a certain finding, and which are not.

Note also that within a drug group there may be considerable variation in the range of worms covered by various products, and the efficacy of these products against different worms.

Farmers should be wary of buying only on price, because all generic drugs (those with the same chemical name) are not necessarily equally effective. Quality may vary between apparently identical products.

All drug groups are subject to the development of drug resistance in all worms listed, this has to be considered when selecting a drug to be used.

To establish the level of resistance, use the Faecal Egg Count Reduction Test (FECRT).

Drug groups are identified by name but also by number on the container for easy reference.

Farmers are strongly advised to consult with their veterinarian before deciding on the best drug to use in a given situation.

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