



Narrow spectrum and combination anthelmintics

Narrow spectrum

These products are only effective against trematodes (*Fasciola*) and blood sucking nematodes (*Haemonchus*). They are recommended for use when these are the target parasites, allowing a reduction in the selection pressure on other non target parasites to the broad spectrum products.

The group includes the substituted phenols (nitroxynil) and the salicylanilides (closantel). They act by uncoupling oxidative phosphorylation at the mitochondrial level, reducing the availability of ATP, NADH, NADPH. In the host they bind to plasma protein, which increases the duration of activity against blood sucking parasites (NB only nitroxynil has a claim in this respect). Triclabendazole (TCBZ) and oxcyclozanide also fall into the narrow spectrum group as they are only active against liver fluke. Rafoxanide also falls into this group but should not be considered as an alternative because of its close relationship to closantel. Further information on this can be found [here](#).

Table 23. Substituted phenols and salicylanilides

Compound	Spectrum of Activity	Activity against			Comments
		<i>Tela Nem Chab</i> <i>Trich Coop Oes</i>	<i>Haemonchus contortus</i>	<i>Fasciola hepatica</i>	
Closantel	Narrow		+	+ > 5 w	Persistent activity against <i>H contortus</i> .
Nitroxynil	Narrow		+	+ > 6 w	Injectable only. Stains wool.
Oxcyclozanide	Narrow			+> 10 w	

Combination Anthelmintics

'Fluke and worm' combinations have traditionally been used extensively by sheep farmers. Products available include combinations of Triclabendazole with 2-LV, 3-ML and MOX; Closantel with 3-ML and 1-BZ; Oxcyclozanide with 2-LV. While these can be a useful tool when it is necessary to target both parasite groups, they are often used as an insurance, without consideration of whether treatment of both fluke and worms is really needed. This 'off-target' use is likely to accelerate the development of anthelmintic resistance (AR) on farms because it will kill susceptible parasites unnecessarily.

Multiple Active Anthelmintics

To avoid confusion in the UK, we use the term 'multi-active' for products containing more than one active against the **same** target parasite. The first (and to date only) such product in this group is the 5-SI derquantel + abamectin product (Startect™) which was launched on to the UK market in March 2012. Any other subsequent such products will also be described as 'multiple actives' so they can be differentiated from the combination products described above. This allows prescribers to distinguish between these products and avoid unnecessary use of the combinations which leads to over-use of anthelmintics.

For a full listing of products click [Here](#)