

**PARASITICIDES USED IN HORSES**

UTCVM 2005

A 'broad spectrum' equine anthelmintic is one that is effective against 4 groups of parasites: 1) large strongyles (LS), 2) small strongyles (SS), 3) ascarids, and 4) pinworms. Of these, ascarids are the most difficult to kill, and the recommended dosage of a product is usually determined by that requirement.

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>REMARKS</b>
<b>ANTHELMINTICS</b>				
<b>BENZIMIDAZOLES (BZD)</b>				
Anthelcide E.Q./Equipar <b>(Oxibendazole)</b>	Br. Sp. <i>Strongyloides</i>	10 mg/kg 15 mg/kg	10% suspension 22.7% paste	Only benzimidazole effective against BZD-resistant SS, but resistance to OBZ can develop
Benzelmin/Equicide <b>(Oxfendazole)</b>	Br. Sp.	10 mg/kg	7.6% powder 37.5% paste 9% suspension	BZD resistance
Panacur/ Safeguard <b>(Fenbendazole)</b>	Br. Sp. ascarids	5 mg/kg adults 10 mg/kg foals	10% suspension 22.2% granules 10% paste	BZD resistance; 10 mg/kg dosage for 5 consecutive days is effective against migrating <i>S. vulgaris</i> larvae and encysted cyathostome larvae (EL3; LL3; L4)
<b>MACROCYCLIC LACTONES</b>				
Eqvalan/Phoenectrin/ Zimectrin/Ivercare/ Equimectin/Rotectin/ Ivercide/Rotation 1 <b>(Ivermectin)</b>	Br. Sp. Bots <i>Strongyloides</i>	0.2 mg/kg P.O.	1.89% paste 1% suspension	Migrating large strongyles; cutaneous/adult <i>Habronema/Drashia; Onchocerca</i> microfilariae; moderate (6 to 8 week) egg reappearance period
Quest <b>(Moxidectin)</b>	Br.Sp. Bots Encysted cyathostome larvae	0.4 mg/kg P.O.	1% oral gel	A milbemycin macrocyclic lactone; fairly similar in efficacy to ivermectin; kills encysted EL3, LL3 and L4 cyathostomes; Use in horses >= 6 months
<b>OTHERS</b>				
Equimax <b>(Ivermectin+Praziquantel)</b>	Br. Sp. Bots <i>Strongyloides</i> Tapeworms	0.2 mg/kg . Ivermectin/ 1.5 mg/kg Praziquantel	Oral gel	Migrating large strongyles; cutaneous/ adult <i>Habronema/Drashia; Onchocerca</i> microfilariae; moderate (6 to 8 week) egg reappearance period; Use in horses >= 4 weeks
ZimecterinGold <b>(Ivermectin+Praziquantel)</b>	Br. Sp. Bots <i>Strongyloides</i> Tapeworms	0.2 mg/kg . Ivermectin/ 1.0 mg/kg Praziquantel.	Oral gel	Migrating large strongyles; <i>Drashia/Habronema</i> adults and; summer sores; <i>Onchocerca</i> microfilariae; <i>Strongyloides</i> ; moderate (6 to 8 week) egg reappearance period; use in horses 5 months and older

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>REMARKS</b>
Combicare <b>(Moxidectin+ Praziquantel)</b>	Br. Sp. Bots Tapeworms	.4 mg/kg Moxidectin/ 2.5 mg/kg Praziquant.	Oral gel	Migrating large strongyles; <i>Habronema</i> adults; Encysted Cyathostomes (LL3, L4); 84 day egg reappearance period; use in horses 6 months and older
Strongid-T or -Paste/ Anthelban/Rotectin 2/ Rotation 1 <b>(Pyrantel pamoate)</b>	Br. Sp.	6.6 mg/kg	5% suspension (T) 18% paste (P) 11.3% powder	Stir suspension before use; some resistance after exclusive use; 2x-3x is effective against <i>Anoplocephala</i>
Strongid-C	Br. Sp.	2.64 mg/kg	4.8 g/lb	Top-dressed on feed daily; works prophylactically by killing L3s before they enter tissues; also kills L4s as the excyst, so egg counts remain low; resistance reported
Strongid-C 2X/ Equi Aid CW/ Nu-Image Continuex <b>(Pyrantel tartrate)</b>	Br. Sp. Guardian/		9.6 g/lb pelleted Ialfa	
<b>Piperazine</b> (OTC –a variety)	Limited/ Ascarids, SS	88 mg/kg	Usually a powder or liquid to be administered nasogastric with other anthelmintics	Toxicity at 6x; effective against resistant SS. Some piperazine-resistant strains of SS reported
<b>ANTIPROTOZOAL</b> Marquis <b>(Ponazuril)</b>	Apicomplexans <i>Sarcocystis</i> <i>neurona</i>	5 mg/kg P.O.	Oral Paste	For treatment of EPM 5mg/kg PO once daily for 28 days
Panacur/ Safeguard <b>(Fenbendazole)</b>	<i>Giardia</i>	5 mg/kg adults 10 mg/kg foals	10% suspension 22.2% granules 10% paste	ELU

**PARASITICIDES USED IN CATTLE**

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>WITHDRAWAL TIME</b>	<b>REMARKS</b>
<b>ANTHELMINTICS</b>					
<b>BENZIMIDAZOLES (BZD)</b>					
Panacur/ Safe-Guard	GIN,D	5 mg/kg	10% paste 10% suspension	8 days 0 days milk	10 mg/kg for <i>Trichuris</i> , <i>Moniezia</i> , <i>Strongyloides</i> , <i>Capillaria</i> and arrested larvae; approved for lactating dairy cows
En-Pro-AL *		over 3 days from blocks as sole salt source)	Feed blocks	16 days meat	NFD
Sweetlix Safe-Guard*			Feed blocks	16 days meat	NFD
Safe-Guard Mineral		(3-6 days as sole salt )	Mineral	13 days meat 0 days milk	
Safe-Guard/ Safe-Guard Scoop <b>(Fenbendazole)</b>		Mix/top dress feed	Pellets	13 days 0 days milk	
Synanthic* <b>(Oxfendazole)</b>	D,GIN, Cestodes	5 mg/kg	9.06% or 22.5% drench 18.5 % Paste	7 days meat 11days meat	Effective against arrested larvae; NFD; NN
Valbazen* <b>(Albendazole)</b>	D,GIN, Cestodes, <i>Fasciola</i> (adults)	10 mg/kg	30% paste 11.4% suspension	27days meat	Effective against arrested larvae; Do NOT administer during pregnancy or for 45 days after the removal of bull; NFD
<b>MACROCYCLIC LACTONES</b>					
Cydectin <b>(Moxidectin)</b>	D,GIN, Hypoderma, lice,mange mites, horn flies	0.5 mg/kg	0.5% pour-on	0 days meat 0 days milk	Observe <i>Hypoderma</i> restrictions; effective against larvae; aids in control of several types of flies; approved for lactating dairy cows; Persistent activity: <i>Haemonchus</i> 2 wks, <i>Ostertagia</i> 4 wks, <i>D</i> 42 days; rainproof
Dectomax* <b>(Doramectin)</b>	D,GIN, <i>Hypoderma</i> , lice, mange mites, <i>Strongyloides/ Trichuris</i> (adults)	0.2 mg/kg	1.0% sol'n for injection 0.5% pour-on	35days meat 45days meat	Observe <i>Hypoderma</i> restrictions; effective against arrested larvae; aids in control of several types of flies; Persistent activity: <i>Ostertagia</i> 4 wks, <i>D</i> 3 weeks;approved for dairy replacement heifers up to 20 months old

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>WITHDRAWAL TIME</b>	<b>REMARKS</b>
Ivomec Eprinex <b>(Eprinomectin)</b>	D, GIN, <i>Hypoderma</i> , lice, mange mites, hornflies, <i>Trichuris</i> , <i>Strongyloides</i> (adults)	0.2 mg/kg 0 days milk	0.5% pour-on	0 days meat	Observe <i>Hypoderma</i> restrictions; effective against arrested larvae; aids in control of several types of flies; approved for lactating dairy cows; Persistent activity: D 3 wks, hornflies 1 wk; rainproof
Ivomec*; Double impact* several Ultramectin* <b>(Ivermectin)</b>	D,GIN, <i>Hypoderma</i> , lice, mange mites, hornflies, <i>Trichuris</i> / <i>Strongyloides</i> (adults)	0.2 mg/kg	1.0% sol'n for injection	35 days meat	Observe <i>Hypoderma</i> restrictions; effective against arrested larvae; aids in control of types of flies; Persistent activity: Ostertagia 3 wks, D 4 wks; NFD
Ivomec*, Phoenectrin*, ProZap iver- mectin* Topline* <b>(Ivermectin)</b>	D, GIN, <i>Hypoderma</i> , mange mites, lice, hornflies <i>Trichuris</i> / <i>Strongyloides</i> (adults)	0.5 mg/kg	0.5% pour-on	48 days meat	As for injectable; pour-ons are more effective against biting lice than injectables; flammable; Persistent activity: 2 wks; NFD NN, NH
Ivomec-Plus* <b>(Ivermectin + Clorsulon)</b>	Same as Ivomec + <i>Fasciola</i> (adults)	10 mg/IVO & 100 mg Clor- sulon/50 kg	1%/IVO % 10% Clorsulon	49 days meat	Use in areas endemic for flukes NFD
<b>OTHERS</b> Levasole*/ Tramisole* Totalon* <b>(Levamisole)</b>	GIN,D	6-8 mg/kg	2.19 bolus oral 13.65% sol'n 46.8 gm powder 11.5% gel; topical	48 hr. oral 7 days inj. 9 days pour-on	Salivation; pain on injection; do not use in debilitated Animals or dairy cattle
Nematel/ Rumatel premix <b>(Morantel tartrate)</b>	GIN	4.4 mg/lb	88 g/lb (19.4%) Feed premix	14 days meat 0 days milk	Approved during lactation NH

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>WITHDRAWAL TIME</b>	<b>REMARKS</b>
Curatrem* <b>(Clorsulon)</b>	<i>Fasciola</i>	7 mg/kg	8.5% sol'n for drenching	8 days meat	Kills 99% mature & 94% imm. flukes; not effective against Paramphistomes; NFD
<b>ANTIPROTOZOALS</b>					
<b>IONOPHORES</b>					
	<b>COCCIDIA</b> <i>Eimeria</i>				
Bovatec*+ <b>(Lasalocid)</b>		Prophylactic- 100-360 mg/head/day	Feed Additive	0	An Ionophore; Approved for use in feed to improve wt gain and feed efficiency in cattle and control coccidiosis; Control of coccidiosis in cattle up to 800 lb; May be used in dairy replacement heifers; Not for lactating dairy cows; Fatal to horses
Rumensin*+ <b>(Monensin)</b>	Coccidia	Prophylactic- 50 – 200 mg/head /day	Feed Additive	0	Fatal to horses; Do not overdose cattle; An Ionophore; Approved for use in feed to improve wt gain and feed efficiency in cattle and to control coccidiosis in pasture cattle, mature reproducing beef cows, dairy calves and replacement heifers. Not for lactating dairy cows
<b>SULFAS</b>					
	<i>Eimeria</i> /bacteria etc				Several trade names available; be sure to provide plenty of water when animals on sulfonamide medication
Albon Amtech DiMethox etc <b>(Sulfadimethoxine)</b>		55mg/kg d 1 27.5 mg/kg d 2-5	5g & 15g Bolus <sup>+</sup>	7 days meat 60 hrs milk	Some forms labeled for bacterial infections and enteritis associated with coccidiosis; usually no label claim for coccidiosis
		55mg/kg d 1 27.5 mg/kg d 2-5	40% Injection <sup>+</sup>	5 days meat 60 hrs milk	IV
		25 mg/lb d 1 12.5 mg/lb d 2-5	12 1/2% Solution* <sup>+</sup>	7 days meat	Add to drinking water; NFD
		12.5 gm bolus/200lb	SR bolus* <sup>+</sup>	21 days meat	NFD

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>WITHDRAWAL TIME</b>	<b>REMARKS</b>
Sulmet*+/- etc		237 mg/kg d 1; 123 mg/kg d 2-5	12.5% drinking water Solution; Oblet	10 days meat	No label claims for coccidia; NFD
SulfaSURE+		165mg/lg 150 mg/lb*	SR calf bolus SR cattle bolus	8 days meat 8 days meat	Labeled for coccidiosis; provides therapeutic amounts in 6 hours; persists for 3 days; Cattle bolus NFD; calf bolus for beef and dairy calves
Bovazine SR+ <b>(Sulfamethazine)</b>		165mg/lg 150 mg/lb	SR calf bolus SR cattle bolus*	8 days meat 8 days meat	Labeled for coccidiosis; provides therapeutic amounts in 6 hours; persists for 3 days; Cattle bolus NFD; calf bolus for beef and dairy calves
Sulfa-Q 20% Concentrate*+ <b>(Sulfaquinoxaline)</b>		5 oz/day/ 3-5 days	20% for drinking water	10 days meat	Labeled as an aide in the control of coccidiosis; NFD
<b>OTHERS</b>					
Corid*+ <b>(Amprolium)</b>	Coccidia	Therapeutic- 10 mg/kg/day for 5 days  Prophylactic- 5 mg/kg/day for 21 days	20% soluble powder 9.6% oral solution 1.25% crumbles	1 day meat  1 day meat	Administer in feed or water; Sanitary conditions necessary to prevent infection; Coccidiosis frequently associated with stress factors like weaning, feed change, crowding, or other disease problems. Approved for treatment and prevention of coccidiosis in calves.
Deccox* <b>(Decoquinatate)</b>	Coccidia	Prophylactic- 0.5 mg/kg/day for 28 days	6 % Premix	0 day meat	For the prevention of coccidiosis in ruminating and nonruminating calves, including veal calves, and cattle. Approved for use in milk replacers. Not approved for lactating animals
Panacur/ Safe-Guard <b>(Fenbendazole)</b>	<i>Giardia</i>	10 mg/kg	10% paste 10% suspension	8 days 0 days milk	ELU; approved for lactating dairy cows
Valbazen* <b>(Albendazole)</b>	<i>Giardia</i>	25 mg/kg bid/2 days	30% paste 11.4% suspension	27days meat	ELU; Do NOT administer during pregnancy or for 45 days after the removal of bull; NFD

\* do not use in lactating dairy cattle; **NFD** not approved for dairy cattle; + do not use in veal calves; **SR** sustained release; **ELU** – extra-label use  
**GIN** – Gastrointestinal Nematodes - Trichostrongylids (*Haemonchus*, *Ostertagia Trichostrongylus spp*, *Cooperia*, *Nematodirus*), Hookworms (*Bunostomum*);  
**D** - *Dictyocaulus viviparus* (lungworm); **NN** – Not effective against *Nematodirus*; **NH** – Not effective against hookworm (*Bunostomums*)

**PARASITICIDES USED IN SWINE**

<b>DRUG</b>	<b>SPECTRUM</b>	<b>DOSAGE</b>	<b>HOW SUPPLIED</b>	<b>WITHDRAWAL TIME</b>	<b>REMARKS</b>
Atgard <b>(Dichlorvos)</b>	R,N,W, Thr.	11.2 - 21.6 mg/kg	9.6% pellets	None	Organophosphate
Banminth <b>(Pyrantel tartrate)</b>	R,N	96 g/T (Prx) (800 g/T) (Rx)	48 g/lb premix	24 hours	Feeding prevents ascarid migration and liver condemnation
Hygromix <b>(Hygromycin)</b>	R,N,W	12 g/T (Prx) 8 g/lb premix	2.4 g/lb and	15 days	Feed prophylactically; may cause deafness with prolonged use
Ivomec <b>(Ivermectin)</b>	R,N,K,L, <i>Sarcoptes</i> <i>Haematopinus</i>	0.3 mg/kg 300g / Ton	0.27% and 1.0% sol'n for injection Premix	18 days 5 days	Variable efficacy against whips; treat 7 days prior to farrowing for mange Medicated feed fed for 7 consecutive days (~100 mcg/kg)
Dectomax <b>(Doramectin)</b>	R,N,K,L,Thr, <i>Sarcoptes</i> <i>Haematopinus</i>	0.3 mg/kg 1 ml/75lbs	1.0% sol'n for injection	24 days	Broad Spectrum farrowing for mange
<b>Piperazine</b>	R,N	50 mg/lb	Various	None	Limited spectrum
Safe Guard <b>(Fenbendazole)</b>	R,N,W,K,L	3 mg/kg for 3 days	4%, 8% and 20% premixes	None	Broadest spectrum against internal parasites of swine
Tramisol/ Ripercol L,Thr. <b>(Levamisole)</b>	R,N,(W),K,	8 mg/kg premix	Wettable powder;	72 hours	Only 70% effective against whips. Pigs with lungworms cough & vomit after treatment

**R** - roundworms, *Ascaris suum*; **N** - nodular worms, *Oesophagostomum dentatum*; **W** - whipworms, *Trichuris suis*; **K** - kidney worms, *Stephanurus dentatus*; **L** - lung worms, *Metastrongylus* spp.; **Thr** - threadworms, *Strongyloides ransomi*; **(Prx)** - Preventive; **Rx** - Therapeutic.