Using PANACUR® POWERPAC to treat ivermectin-resistant ascarids in foals

Highly efficacious • Ideal for foals • Larvicidal

MERCK Animal Health

Using PANACUR® POWERPAC to treat ivermectin-resistant ascarids in foals

Parascaris equorum is the most significant, potentially lethal, parasite in young foals

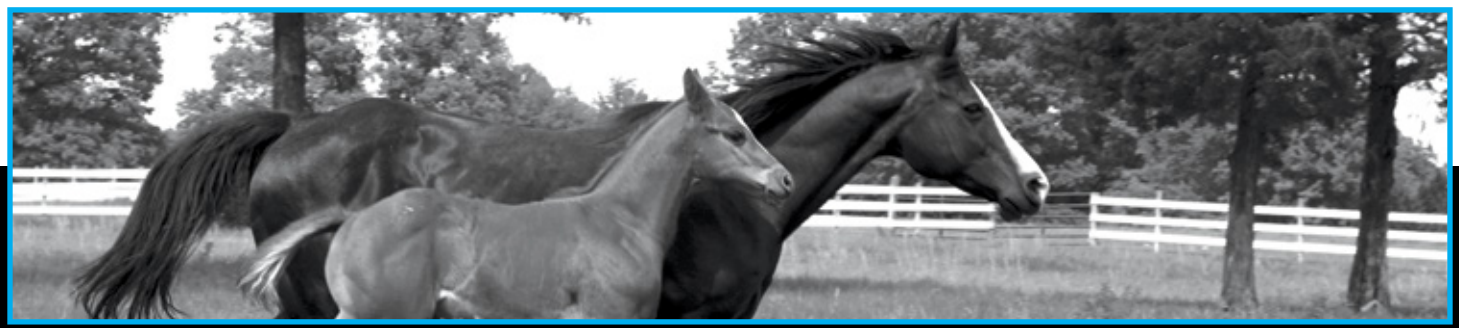
- Clinical signs can include depression, cough, nasal discharge, poor growth, diarrhea, impaction colic and bowel rupture leading to peritonitis and death
- Ascarids are becoming resistant to many dewormers
  - Ascarids are a "Dose-Limiting Parasite" (DLP) for most equine anthelmintics resulting in a low magnitude of difference between an effective dosage and the label dosage which lowers the threshold for parasites to develop resistance
  - Worldwide reports of P. equorum isolates resistant to ivermectin (IVM). Cross resistance often develops to the other macrocyclic lactone, moxidectin[1]
  - Limited reports in the USA of ascarids becoming resistant to pyrantel pamoate[1]

Copper Ridge Farm Study Shows PANACUR POWERPAC (larvicidal fenbendazole) is effective against ivermectin-resistant P. equorum larvae and adults

- Larvicidal fenbendazole regimen: 10 mg/kg orally once daily for 5 days
- 99.52% reduction of ascarid eggs
- 96.3% efficacy as a larvicide
- Proven safe in foals 18 months of age and younger with a gentle mode of action

Recommended PANACUR POWERPAC program to control ascarids during the 1st year of life:

- Beginning at 8 – 12 weeks of age, deworm foals every 8 – 10 weeks with a drug effective against P. equorum
- Treat all foals with a larvicidal dose of fenbendazole (10 mg/kg once daily for 5 days) prior to or at weaning at 4 – 6 months of age
- Use biannual fecal exams in weanlings and yearlings to evaluate efficacy of the deworming program against cyathostomes and ascarids
- Wean foals onto cleanest pastures, with lowest parasite burden, available



Copper Ridge Farm Parascaris equorum study

Study Design

This study was conducted to evaluate the larvicidal efficacy of a 5-day regimen of PANACUR POWERPAC against experimental infection with a known, IVM-resistant population of Parascaris equorum in weaned foals.

- 16 foals between 4 and 14 weeks of age
- Inoculated with 600 macrocyclic lactone (ML)-resistant larvated P. equorum eggs
- 10 days after infection, foals were randomly divided into two groups:
  - Group 1 treated with PANACUR POWERPAC (FBZ) at 10 mg/kg once daily for days 11-15 post-infection (PI)
  - Group 2 treated with oral ivermectin paste at 200 µg/kg on day 15 PI
- Starting at 72 days PI, fecal samples were collected regularly and examined for ascarid eggs

Study Results

Ascarid egg counts were performed using a quantitative sucrose centrifugation technique (Modified Wisconsin Method):

- The study was terminated after six or more positive control (i.e., IVM-treated) foals developed fecal egg counts ≥ 150 EPG
- Over time, the geometric mean egg count of FBZ-treated foals was significantly lower than that of IVM-treated foals and represented a 99.5% reduction in fecal egg counts

Outcome	Group 1 Means (FBZ Treated)	Group 2 Means (IVM Treated)	Efficacy	P-value
Fecal Egg Counts	1.35 EPG	281.03 EPG	99.52%	<0.0001

- Similarly, total numbers of mature P. equorum specimens were significantly lower (96.3%; P<0.0018) in FBZ-treated foals compared to IVM-treated foals
- 4 of 8 FBZ-treated foals had no adult worm infection

Study Conclusion

The study confirmed:

- The isolate of Parascaris equorum tested was indeed resistant to the ML anthelmintic ivermectin, administered at the label dosage
- Five consecutive days of treatment with fenbendazole at 10 mg/kg was safe and highly effective as a larvicide and adulticide against ML-resistant ascarid infections in young foals

Recommend PANACUR POWERPAC for optimal ascarid management.

Contact your Merck Animal Health or distributor sales representative, or call 1-800-521-5767 to order.

PANACUR® POWERPAC
(fenbendazole)

[1]Reinemeyer CR. Diagnosis and control of anthelmintic-resistant *Parascaris equorum*. Published in *Parasites & Vectors* 2009, 2(Suppl 2):S8

556 Morris Avenue • Summit, NJ 07901 • merck-animal-health-usa.com • 800-521-5767

We're for the horse.™
And for helping the unwanted horse. Visit uhvrc.org