Environmental decontamination of coccidia

Dr. Fredley discusses coccidia treatment, prevention and environmental decontamination in shelters and outdoor spaces.

Question:

Hello,

I work for a facility that trains police and military working dogs. There are currently 306 dogs, including puppies, that are mostly housed in open-air runs. Five structures with two rows of runs on either side of a small central building for feeding and grooming, etc. There is one separate contained structure with good ventilation that currently houses three weaned litters. We have found Coccidia in a couple of pups from within these litters. All three litters whelped at our facility, and the dams were dewormed with Pyrantel every 2 weeks, as were the pups after birth. We think the Coccidia is in the soil outside that structure, as the pups are aired in that yard. Very sandy soil. Hot and humid here. What in the world can we use to rid the soil of the Coccidia? We currently have Rescue disinfectant and Parvasol. Thank you so much in advance for your help!

Answer:

Hello,

Thank you for your question. I’m sorry to hear you are having some trouble with coccidia!

Environmental decontamination of coccidia is challenging, which is why prevention plays an important part in management. Unfortunately, coccidia oocysts are resistant to most commonly used disinfectants, which makes it hard to remove from the environment. With that in mind, mechanical removal of gross debris remains the most important step in reducing contamination. That includes prompt removal of fecal material and scrubbing dirty surfaces with a detergent product.

There is no published research showing how well Rescue™ (accelerated hydrogen peroxide) will kill coccidia (or similar organism) oocysts in the environment. However there is research showing that it can be used to
effectively reduce the amount of Clostridium spores in the environment, which suggests Rescue™ would also work well against coccidia oocysts (though it has a label claim against neither Clostridium nor coccidia).

All puppies need enrichment and areas to urinate and defecate and therefore the recommendation is to allow puppies to go outside. Unfortunately, it is more difficult to decontaminate organic environments, though there are some steps that can minimize the risk.

The likelihood of environmental contamination and exposure is decreased by promptly cleaning up any feces and ensuring that the outdoor areas the dogs have access to is in direct sunlight. Additionally decreasing the humidity as much as possible by ensuring there are no areas of standing water and that the soil is allowed to dry also helps to reduce risk. If it really is too humid and the soil never dries, consider putting down a barrier such as gravel to decrease the dampness. Finally, treat known, contaminated yards with Rescue™ to decrease infectious dose (along with aforementioned steps) as it has been recently shown to maintain efficacy when faced with heavy presence of organic material. A final option is to create a yard for the puppies with a surface, such as sealed concrete, that can more easily be disinfected.

Unfortunately Pyrantel Pamoate does not treat for coccidiosis. Pyrantel is effective against roundworms and hookworms. We recommend using Ponazuril (Marquis Paste) as a cost-effective treatment for coccidia due to its clinical efficacy and ease of treatment. A “recipe” for diluting Marquis to a 100 mg/mL dilution can be found here and the cost per dose is pretty affordable for most shelters. Shelters have used it in very young animals (2 weeks of age, less than 1 lb), and report great success. Prophylactic treatment of all puppies and kittens is recommended for shelters/high density environments in which coccidia is more commonly found. It is best to treat puppies with ponazuril once upon intake, as early as 2-3 weeks of age, repeating at 7-14 days and then re-treating based on clinical signs and fecal exams if needed. If you are interested in further reading on parasites in shelters and their treatments, check out our guidelines here.

On a side note, you mentioned that Parvasol is used in the facility, which is a quaternary ammonium compound (QAT). QATs have detergent activity and will work well against enveloped viruses, but they do not work against non-enveloped viruses, such as parvovirus (contrary to what the name implies). They are also caustic, and can cause oral ulcerations and irritation to the upper respiratory tract in dogs and cats. Therefore, we do not recommend using it in a shelter setting without a second agent that is effective against un-enveloped viruses such as Rescue™.
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