Environmental Persistence of Pathogens in Grass & Soil

Why Real Grass is Unsanitary for Dog Daycare Environments

This document summarizes scientific and veterinary evidence showing that pathogens such as **Giardia**, **Coccidia**, and **Canine Parvovirus** persist for long periods in **organic materials (grass, soil, feces, leaves, and debris)**, and cannot be reliably sanitized. These findings demonstrate that using real grass in front of a dog daycare poses a substantial and ongoing sanitation risk.

1. Giardia
Survival: Giardia cysts are protected by a durable outer shell, allowing them to survive for **weeks to months** in moist, cool environments such as **soil** and water. (CDC)
Organic Protection: **Organic matter such as dirt and stool** shields cysts from disinfectants, reducing cleaning effectiveness.
Disinfection Difficulty: Even strong disinfectants like bleach become less effective when **organic material** is present.
Implication: **Moist grass and soil under frequent dog traffic** provide an ideal habitat for Giardia cysts, making it virtually impossible to eliminate contamination completely.

2. Coccidia (Cystoisospora species)
Survival: Coccidia oocysts can survive for **several months** in **moist or shaded soil**, and are even resistant to freezing. (Cornell University Veterinary School)
Disinfection: Most standard disinfectants do not kill coccidia. Only **boiling water, steam cleaning, or 10% ammonia** solutions are effective, all of which are impractical for **outdoor grass**.
Implication: Because **grass and soil are porous and organic**, oocysts can easily accumulate and persist. Veterinary shelter guidelines recommend **sealed, nonporous surfaces** such as concrete instead of soil or turf to control coccidia outbreaks.

3. Canine Parvovirus (CPV)
Survival: Parvovirus is extremely hardy and can remain infectious in **soil for years** under damp, shaded conditions.
Organic Resistance: **Soil, grass, and fecal material** shield the virus from disinfectants. Once contaminated, **grassy areas act as long-term reservoirs**.
Disinfection: Bleach and accelerated hydrogen peroxide lose potency when **organic matter** is present. Complete decontamination of **soil or grass** is **impossible without removal of the substrate.**
Implication: **Grass cannot be reliably disinfected after parvo exposure**, making it a permanent contamination risk in any **high■dog■traffic area**.

Summary & Recommendations
- Giardia, Coccidia, and Parvovirus all persist in **moist, organic environments** and resist disinfection.
- **Real grass and soil** provide perfect conditions for these pathogens to survive and spread.
- **Outdoor grass areas** are repeatedly reseeded by fecal material and organic debris, making sterilization unfeasible.
- Veterinary experts recommend **nonporous, sealed surfaces (concrete or synthetic turf)** for dog facilities.

Conclusion: Using **real grass** at a dog daycare presents an unavoidable sanitation hazard and cannot be maintained to health■standard compliance. Synthetic or sealed alternatives are the only practical sanitary options.