Parasite Management in Solar Grazing Systems



Why It Matters

Effective parasite control is essential in solar grazing due to the high risk of health impacts, productivity losses, and negative publicity. Specific parasitic issues include:

- Blood-feeding parasites like *Haemonchus contortus* (Barber Pole Worm) cause severe anemia and death
- Drug resistance is rising across all dewormer classes
- Solar sites often have permanent shade and limited handling opportunities
- Uncontrolled parasite loads lead to economic losses and poor animal welfare

Benefits of Effective Management

- Reduced mortality
- Better flock performance
- Slower development of dewormer resistance
- Lower labor and treatment costs
- Improved animal welfare and long-term sustainability

PRIMARY PARASITE RISKS

Internal parasites of concern in solar grazing systems include:

- **Barber Pole Worm** *(Haemonchus contortus)*: Most dangerous; causes severe anemia
  - Barber Pole Worm thrives in warm, moist, shaded environments, conditions commonly found under solar arrays. Under solar panels, the risk of ingesting larvae can be lower because the vegetation is typically thicker and higher.
- **Other Strongylid Nematodes & Nematodirus:** *Teladorsagia, Trichostrongylus*
- **Coccidia:** Protozoan parasite requiring different management than nematode (worm) parasites
  - Coccidia most severely affects a lamb crop under high stocking density and poor sanitation environments



Strategic Control Approaches

Grazing Management

- Rotate pastures every 3–5 days to minimize exposure to infective larvae.
- Allow rest periods of 45+ days between grazing events during warm weather. During cooler weather, the rest period needs to be even greater. This may be extended in a solar grazing system with a mowing event in between grazing events.
- Avoid overgrazing by keeping forage above 3–4 inches.
- Use high-density, short-duration grazing strategies to effectively utilize forages.

Deworming Protocols

- Consult your veterinarian to develop a parasite prevention and treatment plan.
- Never rotate dewormers from different drug classes. This increases development of drug resistance. Instead, use combination dewormer treatments by using multiple drugs from different classes at the same time. This should be used in a targeted, selective treatment approach where animals are only treated when needed (FAMACHA > 3, for example).
- Dose each product accurately using individual weights and full label doses.
- Consider the strategic use of copper oxide wire particles (0.5–2g per sheep) in addition to dewormer treatments only when necessary. Consult this factsheet for administration guidelines: Copper Oxide Wire Particles *(Linda Coffey and tatiana Stantno; Dec 2024)*
- Only treat animals with clinical signs of parasite infection (poor FAMACHA score and poor body condition based on the 5-point check).

Genetic Selection

- Use rams with negative fecal egg count estimated breeding values (-80 to -100 is ideal). This will lead to a reduction in parasite burden in future lamb crops.
- Use National Sheep Improvement Program (NSIP) data to track genetic resistance to parasites in stud rams. As a commercial flock, enrollment in NSIP is not necessary to realize benefits in genetic improvement. Instead, buy NSIP stud rams with favorable estimated breeding values for your production system and retain daughters as replacements. After 4-5 years of doing this, 90%+ of the genetics in your replacement females will represent elite NSIP genetics.
- Cull chronically affected animals (30% of the flock carries 70% of the parasite burden.)

Preparing for Success

- Intensify rotational grazing in hot, humid seasons by moving animals to new allocations more quickly. Increased rest periods will increase vegetation height but decrease parasite burden and should be considered when possible. Alternating grazing and mowing events may be used to extend the rest period while maintaining vegetation height.
- Treat animals strategically based on FAMACHA score and/or body condition/5-Point Check.
- Select breeding stock with genetic resistance to parasites to ensure success during the grazing season.
- Monitor for clinical signs of parasitism (lagging behind group, anemia, bottle jaw, poor body condition) during moves. This can be done without the handling equipment required to FAMACHA score for anemia status.

Trusted Resources

- **WormX** – wormx.info (Comprehensive parasite guidance)
- **NSIP** – nsip.org (Genetic selection tools)
- **Extension Services** – Local, science-based recommendations
- **Veterinary Labs** – For fecal egg counts and diagnostics

For more information, contact ASGA at SolarGrazing.org or American Humane Society at AmericanHumaneFarm.org.