Clean Winter Feeding Sites to Reduce Stable Fly Pressure

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To provide protection for cows and calves during the winter and early spring months, temporary feeding sites are often used. While these sites can be used effectively, manure accumulation occurs in the areas around where they are fed over those months. There are several reasons for cleaning the manure from these sites but the most important is to lower the impact of nutrient and fecal bacteria runoff to surface water and reducing stable fly production.

Areas of manure accumulation over the winter months have substantial levels of fecal bacteria and nutrients accumulated. There are approximately 4.5 million fecal coliform bacteria per lb of manure/wasted feed material at a typical winter-feeding site. If we assume 50 square feet for a single hay feeder and a total of 10 tons of wasted hay and manure mixture from this site, this equals approximately 90 billion fecal bacteria. Fecal bacteria present on these sites can survive in the manure/wasted feed material, especially surrounding round bale feeders due to the moisture that is held in that material for numerous months.

From an environmental standpoint, research clearly shows increased fecal bacteria levels in surface water in Kansas during the spring and early summer months. One contributing factor to this is the runoff of fecal bacteria from the multitude of winter-feeding sites, which are generally located in lower, sheltered areas that also have drainage to open water surfaces. Since intense rainfalls begin to occur in spring and into the summer, runoff will occur if the manure is not properly cleaned and removed.

Along with the environmental concerns is the abundant production of stable flies that occurs at these sites. These sites serve as an ideal breeding ground for stable flies due to the combination of a food source (manure and wasted forage) as well as an ideal moisture level of the soil from the covering from both manure and wasted forage. Entomologists at Kansas State University that have trapped flies emerging from winter feeding sites estimate more than 1 million stable flies can emerge from a single hay ring feeding site. The economic threshold for a reduction in weight gain for cattle is five stable flies per leg. Thus, if these areas are not cleaned and cattle are grazed in areas surrounding these sites, it is likely there would be a loss of performance during the summer grazing period.

Site cleaning options: Spreading**.** By cleaning and spreading the material over a larger land area, the material will dry and be exposed to sunlight, thus killing the fecal bacteria and spreading out the manure so limited nutrient accumulation occurs. This is the ideal method of disposal, but limitations of producer's access to a manure spreader may prevent its use in some situations.

Piling and composting**.** Composting generates heat and kills fecal bacteria and prevents their use as a larvae food source. This may be a practical alternative to complete removal of material. The pile must be turned after a couple weeks of initial composting to incorporate the outside material.

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