Grazing/Browsing Behavior and Distribution Patterns of Meat Goats confined in Small Plots


Objectives:
1. To determine the grazing/browsing behavior and distribution patterns of meat goats confined in small plots and
2. To relate the grazing/browsing behavior and distribution patterns of meat goats with weather conditions and available forages.

Procedures:
The study was conducted at the research facility of Tuskegee University, Alabama within a two-acre plot with five virtual zones: Zone 1 was dominated with tall fescue and hairy vetch, and consisted of artificial shelter, tree shade, water supply, and mineral supplement; Zone 2 was dominated with briar; Zone 3 consisted of tall fescue and few browse; Zone 4 basically had tall fescue, and some browse; and Zone 5 dominated with browse species. Diurnal distribution patterns and grazing/browsing behavior of goats were observed for two consecutive days in March, April, May, and July 2014. Diurnal behavior was classified into five categories: grazing, browsing, lying, loafing, and staying in the shelter. Similarly, diurnal observation period was divided into morning (dawn-noon), early afternoon (noon-3PM), and late afternoon (3PM-dusk). Height of the ground vegetation was measured and available forage biomass was determined before bringing goats to the study plots. Before- and after-grazing vegetation change was monitored with the photographic technique.

Results:
Grazing was the dominant behavior of goats when weather was favorable and they were in zones with plenty of ground vegetation, but limited amount of browse species. However, browsing was the dominant behavior in zones with abundant browse species. When it was raining and goats were out of shelter, browsing was the dominant behavior. Irrespective of observation date and time, goats remained mostly in the zone where shelter, shade, watering facility, and mineral supplement were located. Weather conditions, available vegetation, and the location of facilities influenced the behavior and distribution patterns of goats.

Impact:
These findings can be very helpful for goat farmers in Alabama and other states with similar production conditions to improve pastures and grazing facilities for better land utilization and resource management.