Management Intensity Effects on Animal Performance and Herbage Response in Bahiagrass Pastures. (C06-sollenberger091809-Oral)

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Abstract:

Increasing population in Florida has reduced land area available for grazing. Increasing management intensity is one alternative for maintaining current levels of production. Objectives were to quantify management intensity (defined in terms of N fertilization and stocking rates) effects on forage and yearling heifer performance on continuously stocked bahiagrass (Paspalum notatum) pastures. Treatments were Low (40 kg N/ha/yr, 1.2 animal units (AU, AU=500 kg live weight) /ha stocking rate (SR)), Moderate (120 kg N/ha/yr, 2.4 AU/ha SR), and High (360 kg N/ha/yr, 3.6 AU/ha SR). Heifers gained 0.49, 0.50, and 0.38 kg/d on Low, Moderate, and High treatments (P=0.22), respectively, and gain/ha increased from 109 for Low to 257 kg for High (P=0.04) during 112 d of grazing. Pasture herbage mass (P=0.28) averaged 2800 (High), 2900 (Moderate), and 3300 kg/ha (Low). Herbage crude protein (P=0.03) and in vitro digestibility (P=0.14) tended to increase with increasing intensity and ranged from 92 and 426 g/kg (Low), respectively, to 133 and 453 g/kg, respectively, for High. Increasing management intensity increased herbage nutritive value and heifer gain/ha, but it resulted in lower herbage allowance that reduced daily gain.

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