An investigation was carried out to evaluate the effect of low dosages of an ionophore (monensin) on ruminal fermentation and beef cattle productivity during the rainy season in the Municipality of Acapetahua, Chiapas, México. Forage intake was estimated through a metabolic test. Dry matter forage, digestibility and ruminal fermentation patterns (pH, ammonium nitrogen and volatile fatty acid concentration) were estimated using an internal marker, acid insoluble ashes, chromic oxide, a portable potentiometer, ultraviolet chromatography and gas chromatography, respectively. Live weight change and daily weight gains were quantified in a growth test with weightings every 30 days. Forty animals with 180 ± 15 kg were used and randomly assigned to four treatments: T1: 0 mg of monensin (control); T2: 30 mg of monensin; T3: 60 mg of monensin and T4: 90 mg of monensin. Data were analyzed with the SAS statistical package according to a completely randomized design. Results showed that monensin improves (P<0.05) the forage intake (7.6ab, 7.1b, 8.2a y 8.0a kg for T1, T2, T3 y T4, respectively) and increases (P<0.001) the digestibility of the dry matter (49.5b, 54.7b, 69.0a and 66.0a % for T1, T2, T3 y T4, respectively). At the ruminal levels, monensin acidifies (P<0.005) the rumen pH (6.73a, 6.52c, 6.65b y 6.48c), increases (P<0.001) the amount of ammoniac nitrogen (17.6c, 19.5ab, 18.3bc and 20.9a mg dl and improves (P<0.001) volatile fatty acid production (41.2c, 45.3b, 53.4a and 53.8a milimoles respectively). Its concluded that the addition of low dosages of monensin improves feed intake, enhances forage digestibility and increases fermentation rates at the ruminal level in young bulls grazing africa star grass (Cynodon plectostachyus).

Keywords
African star, monensin, digestibility, ruminal fermentation, live weight changes, daily weight gain.