Restricted feeding and high concentrate (HC) diets are potential methods for growing dairy heifers. Ruminal manipulation with additives such as *Saccharomyces cerevisiae* yeast culture (YC) could alter digestibility when added to these diets. A study was designed to study effects of YC on dry matter digestibility (DMD) and N digestibility (ND). An additional objective was to evaluate effects of YC on DMD and ND added to limit-fed HC diets. A split plot design with heifer age as the whole plot and treatment as sub-plot was administered in a 4 period (21 d) 4 x 4 latin square. Eight Holstein heifers (288 ± 4 and 410 ± 2 d of age and 234 ± 15 and 409 ± 20 kg BW) were allocated to 4 treatments consisting of HC TMR (40% CS, 60% grain; 12.6% CP, 25% NDF), and a low concentrate (LC) TMR (80% CS, 20% grain; 12.3% CP, 35% NDF) without YC addition and the same treatments with YC top dressed (1 g/kg intake as fed basis). Diets were fed once/d to provide 0.22 Mcal ME intake/kg EBW$^{0.75}$. Periods consisted of 17 d adaptation and 4 d total fecal and urine collection. Urine was collected using non-invasive urinary devices attached to heifers (pH adjusted to minimize NH3 volatilization); feces were collected hourly and stored in airtight containers. DMD was different between HC and LC (75.67 vs. 72.96 ± 0.7%; $P < 0.01$), and
YC addition increased DMD in both diets (74.97 vs. 73.65 ± 0.7%; \( P < 0.05 \)). No differences were found among the 2 ages (\( P > 0.3 \)). N intake (128.13 ± 1.85 g/d) and apparent ND were similar in all treatments. HC diets decreased fecal output on DM (1.49 vs. 1.77 ± 0.06; \( P < 0.01 \)) and wet (10.48 vs. 7.28 ± 0.36 kg; \( P < 0.01 \)) bases, and YC had a significant effect in both parameters (\( P < 0.05 \)). Urine volume excretion was not different; therefore total manure output was lower for HC diets. We conclude that YC increased DMD in HC and LC diets; HC diets were more digestible and generated less fecal output, with YC enhancing this effect.

**Key Words:** Yeast culture, Forage:concentrate, *In vivo* digestibility