

## Mixed grazing by sheep and steers of irrigated *Digitaria decumbens* pastures in Martinique (FWI)

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The objectives of this study were to estimate the effects of mixing Brahman heifers and growing "Martinik hair sheep" lambs from weaning to slaughter on irrigated *Digitaria decumbens* pastures system of Martinique managed in a rotational system with an age of regrowth of 28 days. The experimental design was : females or males lambs grazing alone, females or males lambs grazing with heifers (4 lambs for 1 heifer), heifers alone. Stocking rate in sheep and cattle body weight ranged between 1720 and 2130 kg/ha for cattle and mixed grazed pastures, and between 790 and 1330 kg/ha for sheep grazed pastures. Lambs were drunched with levamisole each 6-7 weeks. This communication reports preliminary results recorded in 1994.

Live weight gain of mixed lambs were higher ( $P < 0.01$ ) than those of the lambs grazing alone (103 vs 80 g/d for males, 92 vs 83 g/d for females). No effect of mixing sheep and cattle on bodyweight gain of heifers was recorded (general mean : 450 g/d). The leaves to stem ratio of sheep pastures at the entrance in paddocks was higher ( $P < 0.01$ ) than that of

cattle or mixed grazed pastures. The packed cell volume (PCV) of grazing alone ram lambs were 25 % lower ( $P < 0.01$ ) than those of the mixed lambs. No significant difference in PCV was recorded between ewe lambs groups. Geometric means of fecal strongyloid eggs count (EPG) six weeks after anthelmintic drunching were 600, 104, 50 and 8 eggs/g for grazing alone ram lambs, grazing alone ewe lambs, mixed ram lambs and mixed ewe lambs, respectively (all means significantly different,  $P < 0.05$ ). Worms burden were mainly composed of *Haemonchus contortus* but *Cooperia* sp. and *Trichostrongylus colubriformis* were found in slaughtered mixed lambs. No difference was found between heifer groups in EPG.

These preliminary results suggest that mixed grazing systems based on sheep and cattle are reliable in humid tropics and improve body weight gain of lambs. This effect is probably due to differences in gastro-intestinal parasitism. Further studies are now carried out to confirm such an hypothesis and to assess mixing effects on kinetic of sward composition.