**107469 Forage Yield and Accumulation of Fertilized Marandu Grass, Intercropped with Forage Peanut or Not Fertilized Under Rotational Grazing.**

**Poster Number 401**

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Poster Presentation
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**Abstract:**

Introduction of forage legumes into tropical forage pastures is an alternative for nitrogen input due to the biological nitrogen fixation made by legumes as well as the higher nutritive value. The aims of this study were to evaluate the forage production and accumulation of marandu grass, intercropped with forage peanut (mixed) or fertilized with urea. The treatments were marandu grass without N source, fertilized with urea and intercropped with forage peanut, in a completely randomized design with four replicates under intermittent grazing by dairy heifers. The criterion of grazing start was 95 % LI and a one day period of occupation. In order to analyze the effect of treatment, Tukey test was performed, while to analyze the effect of grazing cycles, the polynomial orthogonal contrast was tested. The forage yield ranged 7422 (±1204), 4214 (±526), 5282 (±866) kg DM $ha^{-1}$ for the fertilized, mixed and control, respectively. The forage mass of the treatment fertilized differed from mixed and control ($P<0.001$). A significant effect was found between grazing cycles ($P<0.001$) on forage mass. The forage mass increased linearly and averaged 4117 (±475), 5218 (±878), 4936 (±950), 6141 (±764) and 8119 (±1377) kg DM $ha^{-1}$ for the grazing cycles 1, 2, 3, 4 and 5, respectively. Interaction among treatments and cycles was significant ($P<0.001$), that is, the difference among treatments was cycle dependent. The forage accumulation rate (FAR) was affected by treatments ($P=0.01$), but not by the grazing cycles ($P=0.36$) and the interaction ($P=0.54$). The mean FAR were 149.4 (± 46.7); 96.7 (± 21.4) and 68.7 (± 31.6) kg DM $ha^{-1}$ $d^{-1}$ for fertilized, mixed and control treatments. In terms of forage mass and FAR, the inclusion of peanut negatively affected the production, however, the nutritive value should be evaluate to address all benefits of mixed grasslands.

**Keywords:** forage legumes, forage production, nitrogen input.