The aim of the study was to determinate changes in ruminal and metabolic parameters and milk production in spring grazing dairy cows supplemented with quebracho tannins. Fortytwo Holstein Friesian cows were adapted to a control diet for 10 days (d) grazing Lolium perenne (20% dry matter [DM], 18% crude protein [CP], 2.85 MCal/kg DM metabolizable energy [ME], 38% neutral detergent fiber) ad libitum plus three kg/cow/d of concentrate (87% DM; 14% CP, 2.98 MCal ME) supplied during morning and afternoon milking. During the experimental period (41 d), the cows were distributed in three groups of 14 animals each one with a base supplementation of quebracho-extract tannins: G40= 40g/cow/d; G65= 65g/cow/d; GC= unsupplemented. Urine samples at 0, 14, 26 and 41 d were obtained to determine purine excretion and microbial protein synthesis as well as ruminal fluid, blood and milk samples to determine pH value and NH concentration, plasma indicators of energy and protein balance, and milk composition, respectively. Body condition score and body weight were also registered at the same time; pH and NH ruminal values, urinary purine excretion index, blood parameters, body weight, body condition and milk production were similar among groups (P>0.05). Meanwhile, lower milk protein percentage in G40 and G65 and lower milk fat percentage in G65 than GC were seen (P<0.05). Quebracho tannins supplementation in spring grazing dairy cows in the doses and terms of the study did not affect ruminal fermentation and energy-protein balance parameters nor milk production.

Keywords
Blood parameters, ruminal pH, ruminal, urine purines, tannins.