## SEED GERMINATION TEST AS AN ALTERNATIVE URINE-BASED NON-INVASIVE PREGNANCY TEST IN ALPACAS (Vicugna pacos)

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## ABSTRACT

The goal of this study was to assess the seed germination test as a pregnancy diagnostic method in alpacas (*Vicugna pacos*). Sampling was carried out in 6-8 week intervals from April 2013 to February 2014 on three private farms in the Czech Republic (Central Europe). The urine was collected non-invasively by catching it in plastic cups during spontaneous urination. In total, five urine samples were obtained from each of the 12 tested alpacas. Two urine concentrations were tested, and the urine was diluted by distilled water in ratios of 1:4 and 1:14. Fifteen millilitres of the urine-water solution was applied onto 50 mung bean (*Vigna radiata*) seeds in Petri dishes. Germination rates were counted two days after establishment of the experiments. Lengths of the shoots were measured on the fifth day. It was determined that alpaca urine significantly inhibited germination and growth of seeds in general. The inhibitory effect was higher with higher concentrations of urine. However, seeds germinated and grew better in the urine of pregnant females than in urine of non-pregnant females. While further research is needed, the seed germination test with mung beans seems to be a viable method for pregnancy diagnosis in alpacas.

Keywords: Mung bean, pregnancy diagnosis, Punyakoti test, shoot length, Vigna radiata