

EFFECTIVENESS OF *Areca catechu* LINN AGAINST *Haemonchus contortus* IN VITRO EGG HATCH ASSAY

EFICÁCIA DE *Areca catechu* LINN CONTRA *HAEMONCHUS CONTORTUS* EM TESTE DE ECLODIBILIDADE IN VITRO

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*Areca catechu* Linn belongs to Palm *Arecaceae*s family, popularly known as Betel palm, originated from tropical countries of Oceania and East Africa. Popularly known for its wide pharmacological activity, *Areca catechu* has also antibacterial, antihelmintic, antioxidant and detoxifying activity. In its composition is found carbohydrates, fibers, fats, flavonoids, tannins, alkaloids and minerals, and its nut is the main product with medicinal use. In this study, we tested the action of *A. catechu* L. on *in vitro* hatchability of eggs of sheep gastrointestinal nematode *Haemonchus contortus*. The seed was broken and dried at 37°C, crushed in 2 mm size and its contents were extracted with a solution of acetone:water (70:30), filtered, rotoevaporated and freeze dried. For the main solution it was used 300 mg of plant extract, mixed at 2850 µl of distilled water and DMSO (150 µl), that was diluted in decreasing concentrations (50 mg/ml, 25 mg/mL, 12.5 mg/ml, 6.25 mg/ml, 3.12 mg/ml, 1.56 mg/ml and 0.78 mg/ml). A hundred eggs of *H. contortus* were added to different concentrations of *A. catechu* extract in 48-well plate, and incubated for 24 hours at 27°C to evaluate their effectiveness. Data were analyzed with SAS Probit (SAS Inst., Inc., Cary, NC) estimating the LC<sub>50</sub> and the independent variables (dose). The results showed that at doses of 7.45 mg/mL can inhibit 50% of the hatchability of eggs of *H. contortus* (Figure 1).

OUTPUT FROM PROBIT PROCEDURE

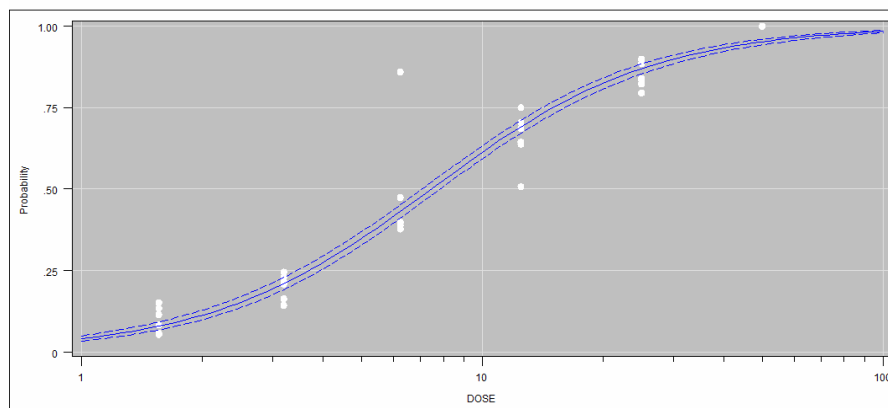


Figure 1. Dose dependent anthelmintic activity of *Areca catechu* on *H. contortus* eggs.

Keywords: *Areca catechu*, betel nuts, *Haemonchus contortus*.

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