

1           **EFFECT OF *Cymbopogon* sp. OIL ON GERMINATION AND ROOTLET**  
2           **GROWTH OF PEANUT SEEDS/ EFEITO DO ÓLEO DE *Cymbopogon* sp. NA**  
3           **GERMINAÇÃO E CRESCIMENTO RADICULAR DE SEMENTES DE**  
4           **AMENDOIM**

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12           Utilization of healthy seeds is an important step to improvement of production due to  
13           reducing occurrence of field diseases. However, the cost of pesticides is often high,  
14           limiting the use by small farmers. The control of seed disease by essential oils is an  
15           attempt feasible and economically, with easy access to several farmers. For adoption of  
16           oil, however, is necessary to analyze its toxicity on seed development. The objective of  
17           this work was to evaluate the effect of *Cymbopogon* sp. oil on development of peanut  
18           seeds (*Arachis hypogaea* L.) focusing on germination and radicle growth. Seeds of BR-  
19           1 cv. were imbibed in a solution of oil (200, 400, 600 and 800 ppm) during two minutes.  
20           In the control, seeds were imbibed in distilled sterilized water. Then, seeds were  
21           uniformly distributed on two paper sheets Germtest<sup>®</sup>, soaked in distilled water and  
22           covered with other sheet and subsequently coiled. Finally, the packets were placed on  
23           plastic bags (four rolls per bag) and incubated in BOD at 25±1 °C and 98% of relative  
24           humidity for seven days. Bioassay was carried out in a randomized design, with four  
25           replicates. Twenty five seeds were used by repetition. Dead seeds, normal and abnormal  
26           seedlings were estimated according to Rules for Seeds Analysis. No interference was  
27           verified on germination rate in oil treatments at 200 and 400 ppm, situated on 98%  
28           (Scott-Knott test, p <0.05). At 600 and 800 ppm, the germination rate was reduced to  
29           86%, suggesting a slight inhibition effect by oil. As to rootlet growth, however,  
30           inhibition effect was more pronounced at 800 ppm, where rootlet length was reduced to  
31           61%. The general average in others concentrations, including control treatment, was 95  
32           mm for rootlet length.

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34           Keywords: *Arachis hypogaea*, seed development; toxicity