

TOXICITY OF THE *Albizia lebbbeck* SEED COAT TO INSECTS

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The bruchids insects *Callosobruchus maculatus* and *Zabrotes subfasciatus* represent the pests that attack seeds of *Vigna unguiculata* (cowpea) and *Phaseolus vulgaris* (common bean), respectively. However, it has been observed that some seeds present resistance to the attack of these insects. The objective of this work was to investigate the *A. lebbbeck* seed coat toxicity to these insects. Natural seeds of *Albizia* were infested with insects and the larval development was accompanied until the death. *A. lebbbeck* seed coat proteins were extracted with 100mM potassium phosphate buffer, pH 7.6 and fractionated to the CM-Sephrose and Sephacryl S-100 chromatography. The fractions were incorporated in artificial seeds to test the insect toxicity. The protein dosage was made by Bradford method and the vicilins dosage was made by the ELISA method. The amount of tannins and peroxidase activity were also dosed. Our results show that the larvae of both insects die during the attempt from crossing the seed coat. Experiments with artificial seeds showed the presence of toxic proteins in seed coat. The dosages of tannins showed that the concentration of those compounds found in the precipitate fraction (0,33%) can be related with the toxicity of this fraction. These results show that the *Albizia* resistance to the penetration of the *C. maculatus* and *Z. subfasciatus* larvae is related with the toxic properties of the seed coat.

Keywords: Seed coat, *Albizia lebbbeck*, bruchids, insects.