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Toxicity of fermented *Jatropha curcas* seed cake

Eduardo Padilla Camberos
CIATEJ, México

The residual seed cake of *Jatropha curcas* is used for the production of biofuels because it has high protein content. However it also contains toxic or anti-nutritional products such as trypsin inhibitors, lectins, phytates and phorbol esters that limit its use as a complementary food for livestock. The aim of this work was to verify toxicity of *J. curcas* seed cake fermented with the filamentous fungus *Rhizomucor* spp. in rodents. Balb-c mice males of 7 weeks were formed randomly in groups of 5 animals. They were fed for 14 days with diets based on fermented and unfermented *Jatropha* seed cakes. The results showed that animals in the fermented *Jatropha* group survived 14 days of experimentation, with the exception of a group member who died on the ninth day from causes of aggression in the group and not for reasons of diet, clinical analysis and weight gain showed no evidence of toxicity. Meanwhile, animals in the control group (unfermented *Jatropha*) died on the fifth day of the experiment. During necropsy, tissue intestinal damage was mainly observed as cause of death. In conclusion, *Jatropha* seed cakes treated by fermentation were adequately detoxified, thus could be taken advantage of as a complementary food for cattle.

Biography

Eduardo Padilla Camberos has earned a PhD from the Universidad de Guadalajara. He is an Associate Research Scientist in the Medical and Pharmaceuticals Biotechnology Unit at CIATEJ. He has published more than 11 papers in reputable journals and published two book chapters.

epadilla@ciatej.mx