

Acute, sub-chronic and chronic toxicity of *Solanum incanum* L in sheep in Kenya

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Abstract:

A study was carried out to determine the toxicity of unripe fruits of *Solanum incanum* L in sheep. The sheep were orally drenched with dried unripe fruits powder of *S. incanum* L at dose rates varying from 1,200mg to 3,600 mg/Kg /day for 9 weeks. Clinical signs were observed daily while blood with and without anticoagulant was taken weekly for haematological and biochemical analysis. Clinical signs started on day two with bloat. All sheep groups showed bloat and coughing. Signs of cerebellar hyperplasia were manifested in 25%, 75% and 25% of sheep in groups 2, 3, and 4 respectively, manifested by staggering gait, lateral recumbency, leg paddling movements, coma and death. The mortality rate was 25% for group 2 and 100% for groups 3 and 4. All sheep groups had pneumonia, froth in the bronchi, lung emphysema and congestion in the brain, liver and kidneys while groups 3 and 5 had hemorrhagic ulcers on distal abomasum to proximal duodenum and hemorrhagic enteritis from duodenum to colon. On histology, all sheep showed necrosis of the Purkinje cells of the cerebellum and Wallerian degeneration of neurons; lung emphysema and interstitial pneumonia, hemorrhagic enteritis, tubular necrosis in the kidneys and hepatocyte necrosis. The results indicate that *S. incanum* L is highly toxic to sheep and allowing sheep to graze on the plant is dangerous to their health.