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## Clinical-Epidemiological Investigation of Moldy Corn Poisoning due to *Penicillium* spp in mules at Udayapur District, Nepal

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### Abstract

A clinical epidemiological investigation of Acute sudden death syndrome due to which 31 mules from a herd of 900 died within the period of 12-07-2006 to 21-10-2006 in Udayapur District Nepal. These animals were being used for good transportation work in hilly region of Nepal. On rout these animals were being fed only whole maize and gram. Normally healthy looking animals started dying suddenly. Initially suspected for acute bacterial disease and treated with broad-spectrum antibiotics and vaccinated with bacterial vaccine. On close observation of herd their feed stuff revealed grains fed to these animal during rainy season was found 20% moldy in appearance. On Postmortem examination acute severe congestion and hemorrhages in liver, lung, spleen heart, intestinal mucosa were found. Histopathological examination of tissue from these organs revealed infiltration of mononuclear cell in tissue indicative of chronic nature of condition. Continuous use of apparently 15-20% moldy grain (maize, gram) was used as feed. On laboratory analysis of sample of same grain was found to be containing  $6^{10}$ - $110^{10}$  CFU/gm of *Penicillium* spp of fungus. When remaining herd still using same feed treated with toxin binder (toxicurb, varishta), liver tonic like bioliv, digevet, mineral mixture promin and immunocare controlled the mortality may be indicative of the disease syndrome being caused by moldy corn poisoning similar to condition Equine Encephalomalacia. Laboratory findings and response of treatment indicates that during rainy season and immediately after rainy season feeding of stored grains are going to be detrimental to equine species. During this period care should be taken to feeding grains to this animal if treated with any toxin binder as well as herbal immunomodulator is going to reduce the chances of occurring this syndrome.

Keywords: Clinical-epidemiological investigation, Moldy Corn poisoning, *Penicillium* Spp., Mule, Nepal,