

TOXICITY OF *Fusarium compactum* ISOLATED IN AUSTRALIA

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F. compactum (Wollenw.) Gordon is a common inhabitant of grassland soils of hot semi-arid regions of Australia (Burgess et al. 1988). The toxic metabolites produced by this species have already been implicated as the major cause of intoxication of large numbers of sandhill cranes in Texas (Cole et al. 1988). In this study, the relative toxicity of Australian isolates of *F. compactum* was determined.

Cultures of *F. compactum* were obtained from a cultivated soil near Alice Springs using the dilution plate technique of Nash and Snyder (1962). Isolates were sub-cultured onto PDA and CLA plates for identification. Twenty cultures of *F. compactum* were selected for toxicity testing.

The cultures were grown on 85 g of crushed malted whole wheat biscuits ("WEET-BIX"®), moistened with 50 ml of water, at 25°C in the dark for 2 weeks. Mycotoxin extraction procedures followed those of Kirksey and Cole (1974). A 0.5 ml aliquot of extract in maize oil was intubated into the crop of day-old chickens. Four chickens were dosed per culture and housed in cages situated in an air-conditioned (32°C), continuously illuminated room. A commercial chick feed and water were provided *ad libitum* for the 4 days of the bioassay.

The results of the bioassay showed that all isolates were highly toxic. Most isolates (98%) caused 100% mortality within the first day. Only one isolate did not produce 100% mortality, but was still significantly toxic, causing 50% mortality after 4 days. No mortality occurred in the three control groups used in this trial: a "WEET-BIX"® extract, maize oil and chickens that were not dosed.

The results support the findings of Cole et al. (1988) that *F. compactum* is a highly toxigenic species and emphasise the need for further investigations of the metabolites produced by this species.

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