**Development of Antiserum for Rapid Identification of Erwinia Spp. isolated from**

**Star-of-Bethlehem (Ornithogalum Spp.) and its Control Using Actinomycetes**

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**Abstract**

Erwinia spp. causes soft rot in Ornithogalum spp., a flower grown purposely for export in Kenya

pausing a great risk to national economy. This study sought to produce antiserum against the

Erwinia spp. using rabbits and to test the sensitivity of the pathogen to actinomycetes isolated

from the soils of Menengai crater. Erwinia spp. was isolated by first sterilizing the plant tissues

using 70% ethanol washed in distilled water and plated in nutrient again. Further sub-culturing

on nutrient agar was carried out to obtain pure cultures. Sensitivity of Erwinia spp. isolates to

actinomycetes crude extracts was carried out using disc diffusion bioassay. Production of

antiserum was done by injecting Erwinia spp. intramuscularly into the rabbits. The antiserum was

tested against the pathogen using immunodiffusion technique. Five potent actinomycetes, PAN

12, PAN 30, PAN 35, PAN 50 and PAN 60 were isolated from the soils of Menengai crater. The

Erwinia spp. obtained had typical cultural and morphological characteristics of the species.

Although there was no significant difference in the zones of inhibition of the Erwinia spp. by the

actinomycetes isolates, PAN 35 showed the largest zones of inhibition. There is need to control

Erwinia spp. otherwise horticultural farming in general and growing of the flower in particular

will be jeopardized.

Keywords: Development, Antiserum, Rapid Identification, Erwinia Spp., Star-of-Bethlehem

(Ornithogalum Spp.) Control, Actinomycetes.