

POD YIELD OF WINGED BEAN AFTER CHEMICAL TREATMENT FOR *CHOANEPHORA* BLIGHT DISEASE

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Abstract: Of 12 winged bean accessions tested, SLS 40 gave the highest pod yield followed by TPT 1, UPS 45 and UPS 99. Application of triademenol, vinclozolin and bitertanol to control *Choanephora* blight increased pod yields. Triademenol was found to be more effective when compared with vinclozolin and bitertanol.

1. Introduction

Winged bean (*Psophocarpus tetragonolobus* (L.) DC) has been recently recognized as a high protein crop for the tropics.¹ Pods are the preferred edible portion of the plant in Sri Lanka. Blighting of flowers, which in turn reduces the number of pods, has been observed in Sarawak,⁸ Papua New Guinea⁷ and Sri Lanka.² The causative fungus responsible for the flower (*Choanephora*) blight disease was found to be *Choanephora cucurbitarum* (Berk. & Rav.) Thaxter.³

Three systemic fungicides – triademenol, vinclozolin, and bitertanol were found to reduce spore germination and mycelial growth of *Choanephora cucurbitarum* and monthly application of these fungicides under field conditions reduced the *Choanephora* blight of winged bean flowers.⁴ This paper reports on the pod yield of 12 winged bean accessions after monthly treatment with the above systemic fungicides under field conditions.

2. Materials and Methods

Twelve winged bean accessions of Sri Lankan, Papua New Guinea, Thailand, Indonesian and Nigerian origin (Table 1) were used in a field trial at the University of Kelaniya during 1986. The trial was a randomised block design with four replicates and a plot size of 1.5 x 4.5 m with a 2 m spacing from each other. Each plot consisted of 2 alternate rows, each with 4 plants at a spacing of 1 m within and between rows. From each plot 2 plants were randomly selected for spraying with each of the three systemic fungicides constituting a total of 6 plants and the remaining 2 plants constituted the controls. The systemic fungicides used were triademenol (Bayfidan), vinclozolin (Ronilan) and bitertanol (Baycor). Sowing, fertilizer application and the method, rate and frequency of fungicide application were as described by Gunasekera *et al.*⁴ Pods were harvested three times during the trial which lasted 3 months and total pod fresh weights determined.