

## ABSTRACT

Internally seedborne fungi play an important role in decreasing the quality of locally produced pigeon pea seed. The more important fungi associated with the crop in Trinidad include *Phoma sorghina*, *Fusarium semitectum*, *F. avenaceum*, *Aspergillus flavus*, *A. niger*, *Phomopsis* sp., *Rhizopus* sp. and *Penicillium* spp. The presence of the first four of the above named fungi as well as *Phomopsis* sp. are negatively correlated with germination *in vitro* of pigeon pea seed. High levels of fungal infection are also negatively correlated to emergence in the greenhouse.

Seed treatment with fungicides significantly increased germination *in vitro* and seedling emergence. An equimixture of Benlate and Thiram applied at the rate of 2.5g./kg. seed was the most effective and practical treatment evaluated. Other treatments evaluated were Thiram at 2.5g./kg. seed, Benlate at 2.5g./kg. seed, Benlate/Acetone suspension 0.2g./80 ml. and Phenazine Methosulfate 1000 ppm.

Fungal infection apparently increases with time; pods are colonised first, followed by the seeds. It is possible to encounter high fungal infection of the ovary, as well as associated floral structures, in the closed flower stage. The fungus load apparently decreases after fertilization as the pod develops. There was a higher incidence of infection in ovaries than in two-week-old pods. However, increased infection was observed in four-week-old pods. External physical characteristics of the seed such as texture and colour are not always indicative of seedborne fungal

contamination. The highest *Phoma* infection was encountered in seeds produced at the University field station, St. Joseph.

Dr. C. W. D. Brackenridge and Dr. E. J. J. D. D. D. for their patients, and for their assistance and guidance.

A great deal of gratitude is extended to Dr. R. G. D. D. D. and Mr. R. D. D. D. for their assistance in photography.

The author is indebted to a host of individuals without whom the project would not have been completed. The following is a representative list and any omissions are regretted and unintentional.

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The entire staff of the Greenhouses, U.S.C.

Ministry of Agriculture, Land and Food production -

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