

PERMANENT REFERENCE

EFFECT OF PREHARVEST FOLIAR APPLICATION OF FUNGICIDE ON SEED QUALITY OF COWPEA (*Vigna unguiculata* (L) walp)

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BY

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A RESEARCH REPORT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF THE ADVANCED COURSE IN AGRICULTURAL BIOLOGY

FOR

THE DEGREE OF THE BACHELOR OF SCIENCE IN AGRICULTURE

FACULTY OF AGRICULTURE
EASTERN UNIVERSITY
SRI LANKA



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PROJECT REPORT
Submitted to the course (ELIS)

ABSTRACT

Cowpea (*Vigna unguiculata*) is an important legume in the tropical and subtropical regions. Cowpea is yield satisfactory under greater diversity of climate conditions than any other legumes. It is a cheap source of protein, which is affordable by poor people. The fungal pathogens that directly infect the cowpea foliage, stem and pods, therefore the study was carried out to investigate the effects of application of fungicide (captan) on seed quality under field conditions and during the storage.

The experiment was carried out at the Eastern University Vantharumoolai, located in the Eastern region, during the period of July to December 2000. The experiment, considering of fungicide (captan) at different times as treatments, was laid in Randomized Complete Block Design (RCBD). All agronomic practices were done in proper way, according to the recommendation. The fungicide was applied once at flowering, at one week after flowering, at two weeks after flowering and different combination of twice (at flowering and one week after flowering , at flowering and two weeks after flowering , one week after flowering and two weeks after flowering) and application thrice (at flowering ,one week after flowering and two weeks after flowering). The unsprayed fungicide was considered as control. There were eight treatments with three replicates in all.

After harvest maturity initial germination, emergence rate and fungal infections were evaluated for the first and second harvested seeds. The first harvested seeds were stored under cold and ambient storage conditions for one month and seed quality was evaluated.

Fungicidal application have shown important in seed quality, determined in terms of viability and vigor and reduction in fungal infection of the seed harvested. However, significant increase in seed quality and reduction in fungal infection were found in fungicidal application done twice, one at flowering and other at two weeks after flowering, fungicidal application three times. (At flowering, one week and two weeks after flowering). The same fungicidal treatments significantly arrested the development of fungi in seeds stored under ambient and cold storage condition and maintained better quality of seeds.

It is evident that the application of fungicide 'Captan' twice and thrice, as indicated earlier, are the effective treatments to reduce the fungal infections and improve the quality of seeds produced and in storage; however, the fungicidal application twice is comparatively more cost effective as to the application of fungicide three times, since there is an additional cost for the third application.

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