

Wattanigone Theppota 2007: Differentiation of *Erwinia carotovora* Strains Isolated from Soft Rot of Vegetable Crops and Die-Back Disease of Jackfruits by AFLP Fingerprinting. Master of Science (Agriculture), Major Field: Plant Pathology, Department of Plant Pathology. Thesis Advisor: Assistant Professor Wichai Kositratana, Ph.D. 90 pages.

*Erwinia carotovora* subsp. *carotovora* (Ecc) is an important pathogen causing soft rot disease in many vegetables and die-back disease of jackfruit and champedak. Serological characteristics of Ecc from jackfruits were different from the Ecc strains of vegetables. An investigation using amplified fragment length polymorphism (AFLP) fingerprinting was undertaken to determine the taxonomic relationship of Ecc strains isolated from vegetables and jackfruit. Total 37 isolates of Ecc were included in this study, of which 20 were isolated from vegetable crops and 17 were isolated from jackfruits. Cluster analysis of DNA fingerprinting profiles by using Dice's coefficient and the unweighted pair group method of averages (UPGMA) divided the Ecc isolate into two groups. Cluster 1 contained Ecc isolates from jackfruits which was clearly separated from cluster 2, containing vegetable isolates at the similarity coefficient of 0.42. Ecc isolates from jackfruits revealed homogenous DNA fingerprinting profiles at similarity coefficient 0.92 while the Ecc from vegetable crops showed a high level of genetic diversity (0.44 to 1.00 similarity coefficients).

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Student's signature



Thesis Advisor's signature

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