Bundit Sophon, Acting Sub Lt. 2015: Study the Etiology and Epidemiology of Leaf Spot Disease in Rubber Seedling (*Hevea brasiliensis*) RRIM 600 Variety. Master of Science (Plant Pathology), Major Field: Plant Pathology, Department of Plant Pathology. Thesis Advisor: Assistant Professor Netnapis Khewkhom, Dr.rer.nat. 77 pages.

Etiology and epidemiology of rubber leaf spot on seedling was studied. Fungal infections were isolated from symptom and non-symptom rubber seedling of RRIM 600 variety after 7 months of grafted plant propagation in Prasang district, Suratthani province. *Colletotrichum acutatum* were found from symptom and non-symptom rubber seedling 70.82 and 63.72 %, respectively. Study of stage of infection on rubber flower buds at first month and blossoms at second month and fruits at third month in 2013 and 2014 were isolated and determined. In both year, the result shows that only *C. acutatum* was the highest of seed coat infection on fruiting stage. Relation of climacteric of planting area and disease incidence caused by *C. acutatum* were estimated. The result shows that the infection of *C. acutatum* was 83.33% at 95.6% of relative humidity, temperature at 27.6 ^{o}C and 5.15 mm of rainfall in May 2014. Ripening rubber seeds were collected from under rubber tree as using for seedling production. Seed infection of *C. acutatum* was found 76.42% from sprout. The evaluation of rubber leaf spot severity was studied by exploration in the nursery field of rubber seedling. The result found that disease dispersal along the wind direction and disease symptom could rapidly dispose. Model of analysis disease progress curve data showed linear model in a direct variation between disease progress and time. Fungicides were tested to control growth of *C. acutatum.* Benomyl and propinep at 10 ppm in PDA could inhibit growth of *C. acutatum.*

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