Danupol Chaiyapong 2013: Detection and Epidemiology of *Pineapple mealybug wilt-associated viruses* Caused of Mealybug Wilt of Pineapple in Thailand. Master of Science (Plant Pathology), Major Field: Plant Pathology, Department of Plant Pathology. Thesis Advisor: Associate Professor Ampaiwan Paradornnuwat, Ph.D. 113 pages.

Surveys for Mealybug wilt of pineapple (MWP) caused by *Pineapple mealybug wilt-associated virus* in Northern, Western, Southern and Eastern of Thailand. The typical disease has revealed the resembling symptoms such as Reddening leaves, Motlling leaves, Dwarf and wilt in each varieties such as “Patavia” “Nang-Lae” “Petchaburi” and “Huay-Moon”. Detection of PMWaV1 and PMWaV2 by using specific primers shown positive results for both of viruses in every part of Thailand. In addition, symptom expression is also variable and apparently linked to factors such as environmental conditions, mealybug populations and pineapple genotype. In addition, the ability of virus transmission throughout tissue culture methods was tested after cultured for 8-12 months and shown positive result for detection by RT-PCR. Analysis of the nucleotides of PMWaV1 and PMWaV2 compared similarities to those of PMWaV from USA strains in Genbank accession number AF414119 and DQ225114, at 97% and 98% identity. The partial genomic (6693 bp) of PMWaV1 was analyzed nucleotide and compared with PMWaV1 (13.1 kb) that reporting similarities to those of USA strain in Genbank accession number AF414119, at 94% identity. The partial genomic ORF1 composed of several genes including helicase, RNA dependent RNA polymerase genes, partial CDS, unknown protein gene and heat shock 70-like protein gene, partial CDS. This is a first report for analyze the partial genomic of *Pineapple mealybug wilt-associated virus* in Thailand.

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