

“Detection of seed borne *Colletotrichum acutatum* in Celery and Development of a Real-time PCR Detection Assay”

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Abstract: Celery leaf curl is a disease that was recently detected for the first time in the United States on celery. Simultaneous occurrence of this disease in Pennsylvania, Virginia and Michigan at farms where plants were grown from seed indicates that this disease is potentially seed borne. Because traditional seed assays have been unsuccessful in detecting the pathogen, quantitative real-time PCR primers have been developed to detect much lower levels of pathogen DNA in seed lots. Our goal is to optimize these existing PCR primers for a seed assay, which will allow rapid detection of infected/infested seed. This will assist growers by screening seed in a fast, cost effective way prior to planting. Successful development of this assay will also provide a tool critical in explaining pathogen spread and will further refine our understanding of the epidemiology of this important new disease.