

**DETECTION OF *THANATEPHORUS THEOBROMAE*, CAUSE OF VASCULAR STREAK DIEBACK OF CACAO, IN CACAO TISSUES LUWU REGENCY, SOUTH SULAWESI\***

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**Abstract**

Detection of *Thanatephorus theobromae*, cause of vascular streak dieback of cacao, in cacao tissues Luwu Regency, South Sulawesi. The aim of this research was to detect the vascular streak dieback pathogen, *Thanatephorus theobromae*, in cacao tissue including leaves, twigs, and wood. Samples of twigs, petioles, and leaves were collected in several areas in Luwu Regency, including Noling, Suli, and Belopa and maintained overnight in plastic bags and/or refrigerator. Small pieces of tissue were surface sterilized and transferred to Tris-EDTA buffer and sent to the USA for analyses based on DNA sequences. In addition, surface sterilized cacao tissues were placed onto solid medium (Water Agar) and liquid medium (CC, Corticium Culture Medium). Hyphae typical of *Thanatephorus theobromae* in being hyaline wide, smooth, lacking clamp connections, branching at right angles and having conspicuous dolipore septa were isolated from wood and leaves but not petioles. The cultures were positively identified based on the internal transcribed spacer (ITS1, 5.8S, and ITS2 of rDNA gene) sequence. Based on the *T. theobromae* ITS sequence and ITS sequences of closely related species available from GenBank, a set of *T. theobromae* ITS specific primers (forward and reverse) were designed and called Than-1, and Than-2. Using these primers in PCR reactions, we were able to detect the presence of *T. theobromae* in wood, leaves and petioles, confirming the existence of this pathogen in Luwu Regency.

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Key words: morphological and molecular identifications, cacao tissues in Luwu Regency, vascular streak dieback, *Thanatephorus theobromae*, PCR probe.

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