

## **MOLECULAR IDENTIFICATION OF SEED TRANSMISSION NATURE OF SESAME PHYLLODY CAUSED BY PHYTOPLASMAS**

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Phyllody caused by phytoplasma is one of the major diseases in sesame (*Sesamum orientale* L.) cultivation. Yield losses ranging from 75-100% in sesame are reported when cultivations are infected at early stages of growth. This study was carried out to detect the seed transmission nature of sesame phyllody. Sesame seeds collected from symptomatic plants were germinated under controlled conditions in a laboratory at the Horticultural Crop Research and Development Institute, Gannoruwa to obtain seedlings. Genomic DNA was extracted from field collected symptomatic plants (leaf midrib), their seeds and seedlings raised aseptically from symptomatic plants of sesame by a modified CTAB method with PVP. All the DNA samples were subjected to standard PCR with universal primers, P1/P7 and nested PCR with R6R2/ R16F2n which gave amplified products with the length of 1800 bp and 1240 bp, respectively. Symptomatic plants and their seeds were positive to the presence of phytoplasmas. It indicated that the disease causing phytoplasmas transmitted from infected plants to seeds. Aseptically germinated 7 and 14-days old sesame seedlings were also positive to the presence of phytoplasmas. Therefore, the results of the study confirmed that the sesame phyllody caused by phytoplasmas can transmit from seeds to seedlings.

**Keywords:** Nested PCR, Phyllody, Phytoplasma, Seed transmission, Sesame