



INTISARI

Mikroorganisme dalam kompos seperti bakteri berpotensi antagonistik terhadap patogen tular tanah dan dapat meningkatkan kemampuan supresif tanah. Penelitian ini bertujuan untuk mengisolasi dan mengidentifikasi bakteri kompos yang berdaya antagonistik terhadap *Pectobacterium carotovorum* dan *Ralstonia solanacearum*. Isolasi bakteri dari kompos media tanam jamur kancing (*Agaricus bisporus*) menggunakan metode *pour plating* pada medium *Nutrient agar* (NA). Metode *dual culture-streak plating* digunakan dalam uji antagonistik sebagai tahapan seleksi. Identifikasi isolat terpilih secara molekuler berdasarkan urutan basa gen 16S rRNA. Hasil penelitian memperoleh 7 isolat antagonistik potensial yakni 9A, 13A, 15A, 16A, 20A, 2B, dan 3B. Berdasarkan urutan basa gen 16S rRNA, isolat terpilih tersebut secara berurutan teridentifikasi sebagai *Bacillus* sp., *Bacillus* sp., *Bacillus* sp., *Bacillus* sp., *Serratia* sp., dan *Serratia* sp.

Kata kunci: Isolasi, identifikasi, kompos, bakteri antagonistik, patogen tular tanah



ABSTRACT

Microorganisms in compost such as bacteria are potentially antagonistic to soil-borne pathogens and are likely to increase soil suppressiveness. This study aimed to isolate and identify compost bacteria that are antagonistic to *Pectobacterium carotovorum* and *Ralstonia solanacearum*. Isolation of bacteria from compost of growing media for champignon (*Agaricus bisporus*) using pour plating method on Nutrient agar (NA) medium. The dual culture-streak plating method was used in the antagonistic test for selection of bacterial isolates. Identification of selected isolates was carried out molecularly based on the base sequence of the 16S rRNA gene. The results of the study obtained 7 potential antagonistic isolates namely 9A, 13A, 15A, 16A, 20A, 2B, and 3B. Based on the base sequence of the 16S rRNA gene, the selected isolates were identified as *Bacillus* sp., *Bacillus* sp., *Bacillus* sp., *Bacillus* sp., *Bacillus* sp., *Serratia* sp., and *Serratia* sp., respectively.

Keywords: Isolation, identification, compost, antagonistic bacteria, soil-borne pathogens