

## HOST RANGE AND DISTRIBUTION OF *Pectobacterium betavasculorum*, THE CAUSAL AGENT OF BACTERIAL VASCULAR NECROSIS AND ROOT ROT OF SUGARBEET IN FARS PROVINCE \*

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### Abstract

Bacterial vascular necrosis and root rot of sugarbeet caused by *Pectobacterium betavasculorum* is one of the important causal agents of sugarbeet root rot in Fars province. The disease has become widespread in recent years in the region. In order to determine host range of this pathogen in cucurbitaceae and solanaceae, two representative virulent isolates were used. Isolates were inoculated into stem, petiole, root or fruit of plants. Plants were kept at  $28 \pm 2^{\circ}\text{C}$  in a growth room or a glasshouse. Control plants were treated with sterile distilled water and kept in similar conditions and checked daily for symptoms development. Disease symptoms in the form of black streaking lesions and rot around inoculation site developed during 2-10 days in leaf, stem, root, fruit and tuber of cucumber, beans, melon, tomato, squash, maize, potato, eggplant, carrot, turnip, garlic, onion, garden beet and date palm fruit. Disease symptoms were less severe on maize than other plants, however, inoculation induced water soaking and rot in the crown area and finally killed maize young seedling after a week. Restricted rot developed on garlic and onion. The *P. betavasculorum* was re-isolated from inoculated plants. Based on the research, melon, cucumber, squash, maize, bean, and eggplant are introduced as potential new hosts of *P. betavasculorum*. The results of distribution studies in various regions in Fars province showed that the disease was widespread in Marvdasht, Kavar, Fasa, Zarghan, and Shiraz vicinity but it was not found in Eghlid.

**Keywords:** *Beta vulgaris*, *Pectobacterium betavasculorum*, Soft rot, Sugarbeet.

See Persian text for figures and tables (Pages ۱۷۹-۱۸۵).

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