

**O 113. AN ECO-FRIENDLY MANAGEMENT STRATEGY FOR PLANT PATHOGENIC BACTERIA: BACTERIOPHAGES**

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**ABSTRACT:** Plant pathogenic bacteria affect a wide range of crops worldwide and have negative impacts in agriculture due to their associated economic losses and environmental damages. Control measures including the use of conventional chemicals or antibiotics have lost their efficacy because of the natural development of bacterial resistance against these compounds. Bacteriophages, eco-friendly means of controlling plant bacterial diseases, are a fast expanding subject of plant pathology with considerable potential to replace the chemical control measures now prevalent. Obtained results, different bacteriophages have given promising results on several serious diseases about 30-95% ratios for *Pectobacterium carotovorum* subsp. *carotovorum*, *P. wasabiae*, *Dickeya solani* and *Streptomyces scabies* on potato, *Ralstonia solanacearum*, *Xanthomonas campestris* pv. *vesicatoria* and *Pseudomonas syringae* pv. *tomato* on tomato, *Xylella fastidiosa* on grapevine, *Xanthomonas axonopodis* pv. *allii* on onion, *P. c.* subsp. *carotovorum* on lettuce, *S. scabies* on radish, *X. a.* pv. *citri* on grapefruit, *X. a.* pv. *citrumelo* on orange, *P. s.* pv. *porri* on leek, *Pseudomonas tolaasii* on mushroom, *Erwinia amylovora* on apple and pear. In addition, it has been determined that the efficacy of phages depends greatly on environmental factors as well as on susceptibility of the target organism and the emergence of resistant bacterial strains. In conclusion, bacteriophages can be used effectively as part of integrated disease management strategies as biopesticides.

*Keywords: bacteria, phages, plant disease, biocontrol, eco-friendly plant protection*