# Silverleaf nightshade, *Solanum elaeagnifolium,* a possible reservoir host of the bacterial pathogen, '*Candidatus* Liberibacter solanacearum' in the Lower Rio Grande Valley of Texas

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ABSTRACT: Certain cultivated and wild solanaceous hosts have been reported to be alternate hosts of the potato psyllid, *Bactericera cockerelli* and the bacterial pathogen, *Candidatus* Liberibacter solanacearum (Lso). These alternate hosts of *B. cockerelli* play a significant role in the epidemiology of zebra chip (ZC) disease of potatoes. Experiments were conducted to study the transmission efficiency of Lso from potato to Silverleaf nightshade and vice versa under controlled conditions. It was observed that *B. cockerelli* fed on Lso-infected SLN plants could also become infected and were able to transmit Lso to potato plants in the greenhouse. The Lso-infected SLN plants were planted in the field to determine if Lso could persist in these plants over the summer and possibly serve as primary sources of inoculum during the potato growing season. Under field conditions, it was observed that the SLN plant grows as a shrub that puts forth stolons that produce daughter plants, with subsequent death of the mother plant. Detection of Lso in the SLN plants was very inconsistent as reported for other solanaceous plants due to uneven distribution and variation in Lso titer. *B. cockerelli* on Lso-infected SLN become infected after two weeks. Lso-infected SLN planted in the field to determine if Lso could oversummer in the aerial parts did not test positive for Lso by the following autumn.