

## Ralstonia

*Ralstonia solanacearum*  
Race 3 biovar 2

**Not known to be present  
in Hawai'i**

*Ralstonia solanacearum* Race 3 biovar 2 is a soil and water borne bacterium that causes wilt diseases in plants including brown rot of potato, bacterial wilt of tomato and eggplant, and southern wilt of geranium.



USDA Aphis PPO, Bugwood.org

UGA1265008



USDA Aphis PPO, Bugwood.org UGA1265010

Geraniums killed by ralstonia



Jean L. Williams-Woodward,  
University of Georgia, Bugwood.org

Leaf burn can also be a symptom  
of ralstonia



## Impacts

- *Ralstonia solanacearum* Race 3 does not occur naturally in the US and poses a threat to the horticulture industry as well as agriculture, specifically potato and tomato crops.



## Identification

- Geranium: lower leaves of plants may show chlorosis (yellowing), wilting, and browning.
- Cut stems show bacterial ooze.
- Eventual plant death.
- Definitive identification requires laboratory testing



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## *Ralstonia solanacearum* Race 3 biovar 2

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### Vectors/Commodities

- Infected geranium cuttings.



### Distribution

- There are five known races of *R. solanacearum* worldwide. Race 1 is endemic to the southeastern US affects tomato crops and related Solanaceae. In April 2020, APHIS confirmed the detection of *R. solanacearum* race 3 biovar 2 in a U.S. greenhouse that had purchased geranium cuttings from an offshore production facility. Thanks to early detection, the pathogen has been eradicated from U.S. greenhouses.



The Distribution of the Japanese beetle in the US. Map by USDA APHIS



### Best Management Practices

- Consider sourcing options and pest distribution when purchasing plants. If sourcing geranium from outside of the U.S., purchase from nurseries participating in the APHIS Geranium Off-Shore Certification Program.
- BOLO: Be on the lookout! Carefully inspect all geraniums for symptoms of the disease: yellowing, wilting, and browning of leaves progressing to plant death.
- Report any suspect pests to 643pest.org or by phone 643-PEST (7378).



The bacterial ooze can also indicate ralstonia.



### Selected References:

- Ralstonia information from USDA APHIS [https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/plant-disease/sa\\_ralstonia/ct\\_ralstonia](https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/plant-disease/sa_ralstonia/ct_ralstonia)

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