

# ***Cupriavidus* and *Burkholderia* Species Associated with Agricultural Plants that Grow in Alkaline Soils§**

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## **Summary**

The presence of *Burkholderia*, *Cupriavidus*, and *Ralstonia* species in northeastern Mexico was investigated. An analysis of the root surrounding soil from different agricultural plants led to the isolation of *Burkholderia* and *Cupriavidus* species but no *Ralstonia* strains. Most *Cupriavidus* species were unknown and grouped into two clusters according to ARDRA profiles. The 16S rRNA sequence analysis showed that the *Cupriavidus* isolates were highly related among them and with different *Cupriavidus* species with validated names. However, SDS-PAGE profiles were distinct among the different ARDRA profiles and to other *Cupriavidus* species examined, suggesting new species in the genus. This shows that *Cupriavidus* is more widely associated with plants than previously appreciated. The BCC isolate was 99% similar to *B. cenocepacia* by *recA* sequence analysis. Additionally, most *Cupriavidus* strains from the two largest groups grew on media containing up to 0.1 mg/ml of copper, 10.0 mg/ml arsenic and 1.0 mg/ml zinc. *Burkholderia* strains grew on media containing up to 10.0 mg/ml zinc, 5.0 mg/ml arsenic and 0.1 mg/ml copper.