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Summary

Citrus clearly is a tree that does not rapidly shed its roots quickly in dry surface soil. While roots are in dry soil, citrus plants regulate maintenance respiration with respect to soil temperature so as to prevent excessive C losses. There is no evidence that citrus maintains appreciable uptake of P by surface roots in dry soil. Root growth is also curtailed. When the soil is rewet, however, citrus roots respond very rapidly in terms of P uptake capacity, thus, indicating essentially no loss of physiological potential for roots maintained through the dry period. Consequently, patterns of C expenditure and uptake recovery are consistent with a strategy that maintains roots during drought periods.