Certain species of trees retain stored water, limit root growth to survive three months without water

20 March 2018

Why do some tropical trees survive extensive droughts and others do not? Scientists took up this question in a three-month study of various tropical saplings. Their results suggest that species that avoid dehydration have traits that favor water storage, such as low tissue density. These traits provided a water reservoir that buffered the drought conditions. Surprisingly, these dehydration-avoiding trees maintained most of their stored water during the drought. Further, these species had a reduced root area, which diminished further during the drought. The team believes this root growth may slow water loss into the surrounding soil. The results suggest that saplings' ability to avoid dehydration during extreme drought depends on retaining stored water.


Provided by US Department of Energy