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## **Forest trees can acquire Phosphorus from atmospheric dust deposition directly via the foliage**

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P availability to trees is often limited by local environmental soil conditions that increase its fixation to soil minerals. In certain regions, atmospheric P inputs can compensate for low soil P availability. Among atmospheric P sources, desert dust is the most dominant. However, currently, the effects of desert dust on the P nutrition and its uptake mechanisms by forest trees is unknown.

Here we hypothesize that forest trees which naturally grow on soils with high soil P fixation capacity can acquire P from desert dust deposited on their leaves via direct foliar uptake.

We performed a controlled greenhouse experiment with 3 forest tree species. The trees were applied with desert dust directly upon their foliage. Our findings shows that direct uptake of P from desert dust can be an alternative P uptake pathway for various tree species and highlight that desert dust can serve as an important P source to forest trees.