

# Is Scotland's soil disappearing into thin air?

## Using isotopes to determine the sources of soil respiration

Different colours are used to represent different 'Carbon' isotope signatures

**Green =  
Respiration from roots  
and microbial use of  
root exudates**

**Brown =  
Respiration from  
microbial turnover of  
soil organic matter**



The point at which the total respired CO<sub>2</sub> lies between the two extreme signatures indicates whether its source is from root respiration or microbial turnover of soil organic matter

