

Influence of soil microorganisms on ecosystem processes. From Van der Heijen et al. (2007)

Ecosystem process	Microbes involved	Estimated microbial contribution to ecosystem process
<i>Carbon cycle</i>		
Plant productivity	Nitrogen fixing bacteria, mycorrhizal fungi, microbial pathogens	0-50%, -50-0%
Decomposition	Bacteria, fungi	Up to 100%
<i>Nitrogen cycle</i>		
Plant nitrogen acquisition		
Nitrogen fixation	Rhizobia, actinomycetes, free-living bacteria	0-20%
Soil uptake	Mycorrhizal fungi	0-80%
Nitrogen loss		
Denitrification	Denitrifying bacteria and some fungi	Up to 60%
Enhanced leaching due to nitrification	Nitrifying bacteria, Archaea	?
<i>Phosphorous cycle</i>		
Plant phosphorous acquisition	Mycorrhizal fungi, P-solubilising bacteria	0-90%
Phosphorous loss due to leaching after mineralisation		?
<i>Regulation of plant diversity</i>		
Stimulation of plant diversity	Arbuscular mycorrhizal fungi, rhizobia	0-50%
Reduction of plant diversity	Arbuscular mycorrhizal fungi	-20-0%