



THE ECONOMIC VALUE OF SOIL BIODIVERSITY

Activity	Soil biodiversity involved in such activity	World economic benefits of biodiversity (x \$10 ⁹ / year)
Waste recycling	Various saprophytic and litter feeding invertebrates (detritivores), fungi, bacteria, actinomycetes and other microorganisms	760
Soil formation	Diverse soil biota facilitate soil formation, e.g. earthworms, termites, fungi, etc	25
Nitrogen fixation	Biological nitrogen fixation by diazotroph bacteria	90
Bioremediation of chemicals	Maintaining biodiversity in soils and water is imperative to the continued and improved effectiveness of bioremediation and biotreatment.	121
Biotechnology	Nearly half of the current economic benefit of biotechnology related to agriculture involving nitrogen fixing bacteria, pharmaceutical industry, etc	6
Biocontrol of pests	Soil provide microhabitats for natural enemies of pest, soil biota (e.g. mycorrhizas) contribute to host plant resistance and plant pathogens control.	160
Pollination	Many pollinators may have edaphic phase in their life-cycle	200
Other wild food	For example mushrooms, earthworms, small arthropods, etc	180
Total		1,542

Total estimated economic benefits of biodiversity with special attention to the services that soil biota activities provide worldwide (modified from Pimentel et al., 1997)