

What do we know about the climate change adaptation potential of agroecology (AE)?

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This sheet contains the simplified synthesis of results from the meta-analyses:
 Columns contain indicators addressed; rows contain systems, practices, characteristics analysed

* "silvopast.": silvopastoral systems; "incl. Residues": incl. residues left on the fields; "Crop rot.": Crop rotations

Colour code	performance with respect to the baseline:																	
green	significantly better																	
magenta	significantly worse																	
grey	no effect																	
red	Practices reported in meta-analyses that may not be deemed agroecological in all cases																	
blue	Indicators referring to temporal stability/variability																	
Indicator groups	To the right:	Organic agriculture	Low-input systems	Agroforestry (incl. silvopast.)*	No tillage	Reduced tillage	Cover crops	Biochar	Organic fertilizers (incl. residues)	Crop rot./diversity/intercropping*	Grassland diversity	Biodiversity general	Landscape complexity					
	Below: Indicators																	
Soil health	Soil organic carbon contents																	
	Soil organic carbon sequestration rates																	
	Stability of SOC and C sequestration																	
	Total soil N																	
	Soil aggregate stability																	
	Soil dry room density																	
	Infiltration																	
	soil loss																	
	surface runoff																	
	Soil fertility/ Various beneficial physical soil properties																	
Soil biodiversity	soil microbial activity																	
	Soil microbial biomass																	
	Soil microbial functional diversity																	
	Soil biodiversity/ microbial diversity/ richness																	
	Soil bacterial diversity																	
	Soil micro, meso and macro diversity																	
	abundance of soil microbial communities																	
	Arbuscular mycorrhizal fungi diversity																	
	Nematode abundance																	
	Nematode community diversity/ stability																	
Food web indices																		
Earthworm abundance and biomass																		
General biodiversity	Species richness																	
	Species abundance/diversity																	
	arthropod diversity/ richness																	
	Stability of species richness/ abundance																	
Plant protection	Natural plant protection																	
	Level of biological control																	
	Animal pest abundance																	
Productivity	Weed abundance																	
	Pathogen abundance																	
	Total biomass production																	
	Stability in total production																	
	Yield																	
	Yield stability																	
	Pollination services																	
	Resource use efficiency																	
	Ecosystem services stability																	
	Profitability																	
Stability of costs and profits																		
Employment	Rural employment																	
Health	Exposure to pesticides																	

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Colour code performance with respect to the baseline:

- green: significantly better
- magenta: significantly worse
- grey: no effect
- red: Practices reported in meta-analyses that may not be deemed agroecological in all cases
- blue: Indicators referring to temporal stability/variability

striped green: better, but not significant
 striped magenta: worse, but not significant

- Policy makers request robust knowledge on the adaptation potential of AE
- There is much anecdotal evidence, but hardly any comparative case studies on the CC adaptation performance of AE with respect to some baseline
- There are many meta-studies on the correlation between core characteristics and practices of AE and core indicators of climate change adaptation
- From those latter, a clear picture emerges: core characteristics and practices of AE correlate positively with key aspects of CC adaptation.