Supplementary material for

Effects of grazing exclusion on soil microbial diversity and its functionality in grasslands：A meta-analysis

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Supplementary Table S1 Results of Egger's tests for microbial diversity and ecosystem multifunctionality (P_E < 0.05 marked in red, suggesting a significant publication bias).

Variable	P_E value
Shannon	0.28168
Richness	0.89163
EMF	0.07924

Supplementary Table S2 Relationships between microbial diversity and plant variables, soil variables and ecosystem multifunctionality index across different microbial groups. Asterisks denote significance:* P<0.05, ** P<0.01, *** P<0.001.

variables	Bacteria		Fungi	
	Shannon	Richness	Shannon	Richness
PS	0.3	-0.12	-0.22	-0.49
BGB	-0.072	0.16	0.13	0.35
pH	-0.001	0.33**	0.14	0.47**
Moisture	0.055	0.15	0.18	0.055
SOC	0.27**	0.27	0.23	0.17
TN	0.3**	0.23	0.16	-0.24
TP	0.3	0.43**	-0.079	0.13
AN	0.24*	0.33**	0.31*	0.11
AP	0.33*	0.46***	-0.23	0.082
MBC	-0.073	0.45*	-0.21	0.22
MBN	0.27	0.44	0.018	0.24
BG	-0.17	-0.22	0.3	-0.5
NAG	0.011	-0.13	0.3	-0.5
Pho	0.24	-0.055	-0.21	-0.57
EMF index	0.23*	0.32**	0.19	0.06

Supplementary Table S3 Relationships between plant Shannon, microbial Shannon, and microbial richness and ecosystem multifunctionality index across different grassland types. Asterisks denote significance:* $P<0.05$, ** $P<0.01$.

	Alpine	Temperate	Semidesert
Plant Shannon	0.42*	0.46	0.31
Microbial Shannon	0.097	0.35**	-0.31
Microbial richness	0.088	0.22	0.096

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