SOIL Discuss., author comment AC3
https://doi.org/10.5194/soil-2021-132-AC3, 2022

Reply on EC2

Ling Sun and Jinggui Wu

Author comment on "Combined application of animal manure and straw benefit soil fauna community in dryland farming" by Ling Sun and Jinggui Wu, SOIL Discuss., https://doi.org/10.5194/soil-2021-132-AC3, 2022

Thank you for your submission the SOIL-D: "Combined application of animal manure and straw benefit soil fauna community in dryland farming." Two peer reviewers have provided feedback in agreement that the manuscript has scientific merit, but there are major underlying concerns.

- The most major of these is clarification around the litter bag approach. This approach provides limits in how these data are interpreted and their significance for understanding soil invertebrate communities in active agricultural fields.

Answer: In the study, the soil invertebrates' communities are the ones inside the nylon bags, representative of the invertebrates' community by selected colonisation of the organisms that inhabit the surrounding soil (exchange/movement with the surrounding environment through the 2 mm mesh).

- There is also concern around how taxa from different taxonomic levels (e.g. sub-phyla, family, genius) are presented throughout the paper. In addition, further clarification around how richness, diversity, and abundance are interpreted from the data would strengthen the manuscript. These are major concerns and require extensive revisions, including rewriting sections and rebuilding tables and figures.

Answer: these have been corrected.

Fauna description	S		SO		SC		SP	
Order	Family	Genus	Individuals	Dominance (%)		Individuals	Dominance (%)	

Araneae		243	+++	382	+++
Astigmata		272	+++	244	++
Actinedida		215	++	133	++
Oribatida		638	+++	1013	+++
Homoptera	Aphididae	0		2	+
Hymenoptera	Formicidae	1	☐	6	☐
Diptera	Tipulidae	3	☐	0	☐

	Scutigerellidae		0			4	+	
Tubificida	Enchytraeidae		3	☐		2	☐	
Coleoptera	Carabidae		1	☐		2	☐	
Staphilinidae		1	☐		2	☐		
Staphylinidae		1	☐		7	☐		
Symphypleona	Sminthuridae	*Sminthurus*	0			0		
Poduromorpha	Onychiuridae	*Onychiurus*	1	☐		13	☐	

Neanuridae	*Protanura*		5	☐		3	☐
Neanura		8	☐		6	☐	2
Hypogastruridae	*Hypogastrura*		9	☐		32	☐+
Entomobryomorphae	Isotomida	*Proisotoma*		0		4	+
Isotoma		17	☐		33	++	25
Folsomia		278	+++		172	++	602
Desoria		301	+++		409	+++	391

Entomobryidae	*Lepidocyrtus*		0		17	+	
Entomobrya		156	++	157	++		294
Morpho-richness			18		21		
Total Individual			2153		2643		

- In addition, both reviewers provide extensive comments and questions within annotated pdfs of the original submission

Answer: these have been corrected.

Please also note the supplement to this comment:
https://soil.copernicus.org/preprints/soil-2021-132/soil-2021-132-AC3-supplement.pdf