

Review manuscript# 122760v1

“Insights into antibiotic resistomes from metagenome-assembled genomes and gene catalogs of soil microbiota across environments” Han et al

Reviewer 2:

The authors seem to have addressed the comments in the review in a comprehensive manner.

The abstract is more representative of the paper and the Introduction more complete. The concerns about wording with statistical significance and power has been addressed.

76-“ **the functional characteristics of soil microbial communities (e.g., metabolic pathways)**” I would delete ‘the functional characteristics’. It is clearer and more accurate to say “...rarely systematically linked the metabolic pathways of soil microbial communities to ARG profiles.”

89-91 not a sentence

108- delete “immediately”. I assume the freezer was not on site.

I think that most of the suggestions about reorganization of Figures were followed. Fig 4D in particular is a good fit.

203-This clarification is welcome. You might need to cite MIMAG here now though (e.g., Bowers et al) since it is the first mention.

315-317 Probably belongs in Discussion not Results

363-364 Thank you for adding this information that intrigued me. The implications in the last sentence may belong in Discussion rather than Results.

396-Consider deleting “unique”. That would be difficult to assert. The main point is well-taken though.

400- The details about microbial environment are welcome.

452- This section does a better job of not overstating conclusions about the negative correlation between agriculture and ARG abundance.