

Ref.: Ms. No. STILL-D-22-00785R1

Mixing cover crops suppresses weeds and roto-till reduces urban soil strength and improves infiltration

Soil & Tillage Research

Dear Mr. Medina,

Thank you for submitting your manuscript to Soil & Tillage Research. I have received comments from reviewers on your manuscript. **Your paper should become acceptable for publication pending suitable moderate revision and modification of the article in light of the appended reviewer comments.**

When resubmitting your manuscript, please carefully consider all issues mentioned in the reviewers' comments, outline every change made point by point, and provide suitable rebuttals for any comments not addressed.

To submit your revised manuscript go to <https://www.editorialmanager.com/still/> and log in as an Author where you will see a menu item called 'Submission Needing Revision'.

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I look forward to receiving your revised manuscript.

Kind Regards,

Rainer Horn

Editor

Soil & Tillage Research

Comments from the Editors and Reviewers:

Reviewer #2: The Authors have revised the paper with consideration of the Reviewer's comments. There are however some **changes in terminology needed**. In the original submission, the term "Compaction" (as characterized by penetrometer resistance) was incorrectly used. In the revision, "Compaction" was replaced by soil strength and used then as a synonym for shear strength. Based on that, the shear strength is typically defined as the resistance to shear stress (in terms of the effective internal friction angle and effective cohesion) was not measured and is not always correlated with the cone penetrometer resistance **suggesting using the term "penetration resistance" instead of "soil strength** (i.e. resistance to shear stress)".

This comment refers to the following places:

- *Title,
- *Highlights,
- *Section 1: Introduction (2nd and last paragraphs),
- *Section 2.3: Sampling (1st paragraph),
- *Section 4: Discussion (1st ,3rd and 4th paragraphs).

Another comment:

- *Section 4 : Discussion (6th paragraph): please use SI unit instead of an inch.

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- *Section 4: Discussion (1st ,3rd and 4th paragraphs).

We thank the reviewer for this specification of terminology. In light of this precise terminology, which also aligns with other studies published in *Soil & Tillage Research*, we have changed all (approx. 27) instances of “soil strength” to “soil penetration resistance”. This includes in the following places:

- *Title**
- *Highlights,**
- *Abstract,**
- *Introduction (2nd and last paragraphs),**
- *Methods (1st paragraph of Sampling sub-section),**
- *Results (1st sub-heading),**
- *Discussion (all paragraphs except 1st).**

Another comment:

- *Section 4 : Discussion (6th paragraph): please use SI unit instead of an inch.

We also changed the units to SI instead of inch in this final Discussion paragraph.