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## SDI FINAL EVALUATION FORM 1.1

**PART 1:**

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| Journal Name: | International Journal of Plant & Soil Science |
| Manuscript Number: | **2013_IJPSS_8827** |
| Title of the Manuscript: | **Seedling Emergence and Seed Germination of Shepherd's needle (Scandix pecten-veneris) as Affected by Seed Weight and Burial Depth** |

**PART 2:**

| **FINAL EVALUATOR'S comments on revised paper (if any)** | **Authors' response to final evaluator's comments** |
|---|---|
| The authors argue for their use of temperature data at 5 cm that they have no data for other depths and that 'for a **given** period of trial, **mean** temperature between 5 and 15 cm do not differ too much'. Ok! But say somewhere that temperature at 5-cm depth is used under the assumption that in the same period it is probably not too much different of temperatures at other depths and then provide some convincing support for this statement.<br>They also state that 'Temperature is not the only condition needed for a seed to germinate or not.' Of course not but 1) is the only condition for which the authors provide data! Why? and 2) it is not the only but it probably is the single most important environmental factor in seed germination and establishment [cf. RJ Probert (2000) in Seeds. The ecology of regeneration in plant communities (M Fenner, ed.) 2nd ed., pp. 261-292, CABI].<br><br>In relation to vertical movements of seeds data of Benevento refers to **no-till** soil which is not the case in these experiments. The authors had to dig, alter structure and compress the soil. Comparing this work with burial of seeds sown at no tilled soil surface is hardly appropriate!<br><br>So, in an experiment going down only to 15 cm the authors use texture data down to 30 cm depth because they did other experiments not reported here! Really strange but I'm happy that in those other tests they did not required texture data down to 1 m!<br><br>However the main problem is still without proper consideration.<br>In my first evaluation I showed that MET is ambiguous and inappropriate as indices generally are. I repeat what I wrote then. Imagine two species A and B. Records are done in day 1, 2, 3, 4, 5, 6; in species A the emergence is: 6 plants in day 1, 4 plants in day 6 (clearly bimodal); in species B the emergence is 10 plants in day 3 (clearly unmoral). MET is the same!<br>In my second evaluation I specifically asked the authors to explain the meaning a MET. If MET is 31.8±1.2 days exactly what happened in average at 31.8 days? I got no answer.<br>I also asked for the range of possible values of MET but the authors provided the range of values they found, not the range of possible values which requires the determination of the maximum value possible (see for example Khan et al 2001. Can J Bot 79, 1189-1194).<br>Now the authors argue that MET adequacy is a matter of scientific debate and despite that MET represents about half of their data, MET being a matter of scientific debate is not a matter of their manuscript!<br>My question is: how come that their manuscript is not affected by matters of scientific debate in which it is heavily based? Their manuscript does not relate to science? Then to what? Law, music, creative writing?<br><br>Unless the matters above, especially the use of MET, are properly dealt with I advise for rejection. | Comments about soil temperature are added (lines 120-124, MS v.3).<br><br>Comments for MET and the range of possible values of MET<br>According to the provided example are added (lines 84, 89-93, 117-118, MS v.3).<br>The previous MET values are now removed (line 215, MS v.3). |