

Response to Ref 2

General comments

We would agree with many of the general comments made by this referee concerning the preliminary nature of the Timelines model. The limited testing we were able to perform showed that additional logic and up-to-date data for parameterisation are required. We would however take issue with the statement that '*In conclusion the results are not sufficiently good to justify the use of the model*'. This conclusion may be correct in the case of investigations that use a single model containing a more sophisticated treatment of field operations or in multi-model investigations with no requirement to provide model-independent timings for field operations. However, in some multi-model investigations, it will be essential to provide such model-independent data e.g. if an objective is to compare the simulation of crop and soil processes independently of model-specific treatment of the timing of field operations. Despite weaknesses in the Timelines model, it still provides an independent assessment of crop timelines, which we think is useful for investigators, and is the best we can offer at the moment. We have added a sentence to the Conclusions to make readers aware that the model is work in progress.

If investigators have resources for modelling the timing of field operations, this Discussion paper at least gives them an indication of what works and what does not, and the source code for the software is available if they wish to use this as the basis for further development. We therefore consider that the work described here deserves publication.

Specific comments

Page 10587, line 27: "Wattenbach, 2012" should be "Wattenbach et al., 2012"

Response: Corrected

Page 10592, line 21. the citation of "EMEP, 2009" is not in the reference list.

Response: Corrected

Page 10593, lines 4 and 5 causes some confusion as the landscape names are not well related to the coordinates in brackets. "Turew" should be moved to the next line (between "and" and "Poland").

Response: Corrected

Line 4, page 10595: the reference to table 1 is not clear. I assume it refers to table S1 in the supplement. Same holds for, e.g table 2 in line 10 at the same page and probably others within this paragraph.

Response: Corrected

Line 16, page 10595: please add “small” between “there are” and “errors”.

Response: Corrected

Line 5 page 10596: Delete the first appearance of “later” in the sentence.

Response: Corrected

Page 10601, line 22 ff.: European Commission. European Soil database is not cited in the text. Page 10602, line 16 ff.: Sutton et al. 2007 is not cited in the text.

Response: Corrected

Fig. 3: the size of the characters is far too small

Response: Corrected