

## ***Interactive comment on “Soil Conservation in the 21st Century: Why we need Smart Intensification” by Gerard Govers et al.***

**M. van Ittersum (Referee)**

[martin.vanittersum@wur.nl](mailto:martin.vanittersum@wur.nl)

Received and published: 7 October 2016

This is a very well written manuscript that makes a plea for a smart intensification of agriculture to allow for effective soil conservation in the 21st century. One may argue it comes close to an opinion paper rather than a research or review paper, but it is consistent in its reasoning and it is generally well backed up by references and some data. I largely agree with the reasoning of the authors and I think it is well worth to publish such a message. But clearly the limitation is that the piece is largely qualitative as is illustrated by Table 1 and Figure 1. I think the authors should emphasize that Figure 1 is illustrative and not based on any data – if that is not true the authors must indicate the basis for their ‘quantities’. Also, some kind of definition of Smart intensification is needed: do we really need such term, or would sustainable intensification be equally good? Please no more confusing terms than strictly necessary!

C1

Other than that, I have no reservation to recommend the manuscript for publication after minor revisions:

1. I suggest to add to the title ‘of agriculture’ and consider to substitute smart by sustainable
2. The abstract is rather vague and general. It would be good to make it more specific in its conclusions.
3. Line 45: important => sizeable
4. Line 90: quantities per ha may be more meaningful for readers.
5. Line 101: delete ‘is’
6. Line 103: phosphorous => phosphorus
7. Line 111: takes => take
8. Line 112: ITPS in full please
9. Line 128: delete ‘different’
10. Line 137: is needed => data?
11. Line 146: give examples of such spatial data please
12. Line 153-165: Some elaboration on lateral spatial effects is justified.
13. Line 180: delete because
14. Line 257-260: unclear sentence; please rephrase
15. Line 284-6: see more recent reviews on conservation agriculture and tillage, e.g. by Van Kessel and others
16. Line 330: These => This
17. Line 333-5: unclear sentence; please rephrase
18. Line 371-374: see e.g. Van Vliet et al., 2015 in Global Food Security
19. Line 387-9: FAO projects 60-70% which is probably closer to the real number.
20. Line 390: less => fewer
21. Line 421-2: please give numbers in just two digits
22. Line 429: of => of 23.
23. Line 427-430: please check Chamberlin et al. (2014) in Food Security: clearly there are indications there is less land ‘available’ in SSA.
24. Line 450: call => called?
25. Line 486: full stop after the reference.
26. Line 506: delete indeed
27. Line 513: inventories => storage?
28. Line 519: inventories???
29. Line 523: preserver => preserve
30. Line 556: is problem => is a problem
31. Line 572: delete be
32. Line 602: location => location
33. Line 609: While it most => While it is most
34. Line 609: insert comma after developed
35. Line 618: people???
36. Line 625: I do not think Foley et al. (2011) is an appropriate reference for this statement. I would rather use Zhang et al. (2015) in Nature, Lasseletta et al. in Env. Res. Letters (2014) and Sattari et al. (2012) in PNAS.
37. Line 629: Delete Clearly
38. Line 631: economical => economic
39. Line 632: easier => be easier
40. Line 637: storsks?? Stocks perhaps?
41. Figure 1: please clearly indicate this figure is just illustrative but not meant to be quantitative. If this is not the case, then please back it up with data!
42. Table 1: it would be good to

C2

define poor, fair, negative, etc.

---

Interactive comment on SOIL Discuss., doi:10.5194/soil-2016-36, 2016.