

Biogeosciences Discuss., referee comment RC1
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Comment on bg-2021-183

Anonymous Referee #1

Referee comment on "Modeling the growth and sporulation dynamics of the macroalga *Ulva* in mixed-age populations in cultivation and the formation of green tides" by Uri Obolski et al., Biogeosciences Discuss., <https://doi.org/10.5194/bg-2021-183-RC1>, 2021

This is an interesting, generally succinct, and strongly written contribution focusing on mathematical modeling of *Ulva* sporulation and growth. *Ulva* seagrass culture is an emerging industry, thus this modelling is relevant both in terms of IMTA and the occurrence of green tides. My primary issues with the paper focus on two aspects: 1) **the graphics** – Figures 1 and 2 need to be made bigger to better demonstrate the patterns illustrated. I'm also uncertain as to the utility of Figure 3 – it mostly just looks blue, with a small hint of yellow. Either make this figure more meaningful with a better spread of color differentiation, or remove. 2) **Verification** - this paper focuses on just the model, and doesn't provide any application of the model to real world data. While there is one instance where the authors note that the model appears to be consistent with what they previously observed, I felt myself wanting verification that these models are accurate. For instance, if you apply these models to the real world, would the models verify what actually happens in the field? I would like to see this issue addressed in more detail. For instance, do the authors have any field studies that can be added to this contribution, or is this the next step?

Comments by line:

33: note that *Ulva* can also be found at mesophotic depths, and not just the littoral and sublittoral zones

38 – 47: These sentences are missing citations for the information presented

40: change "in producing" to "the production"

48 – 53: These sentences are also missing citations for the information presented

202 – 203: change “could happen” to “is possible”

236: change “algae production” to “algal production”