Comment on egusphere-2022-104
Anonymous Referee #2


Dear Editor,

This work investigates the driven factor of root growth. It provide a simply but practical method to model root growth. Here the manuscript needs some improvements to enhance its clarity and readability. The specific comments are as follows.

Specific comments:

L 21-24: some models described the maximum rooting depth by a linearly increasing function with accumulated temperature.

L 47: As I know, Some crop (e.g. Spacsys and STICS) and land surface models (e.g. CLM 5.0) have implemented dynamic root growth.

L 85: equation (1): the theta_n in bottom right should be followed by 'dz'

L 142-144: It should be the reason why exponential root profile is widely used in crop models and land surface models.

Fig. 7 and Fig. 8: “rooting dencity” should be “root density”.