

Comment on **essd-2022-254**

Anonymous Referee #1

Referee comment on "ChinaCropSM1 km: a fine 1□km daily soil moisture dataset for dryland wheat and maize across China during 1993–2018" by Fei Cheng et al., Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2022-254-RC1>, 2022

I was very impressed by such valuable daily SM for more than 20 years over the whole mainland of China. Comparing with quantities of public products retrieved from remote sensing or downscaling into fine resolution, Chinacropland really open a new window for us to provide key parameters on earth observations. Irrigation practices do play more significances on crop production in China, especially for dryland crop. Therefore, no any doubt will be shown on the values of irrigation sub-model. Such novelty imply a potential way for applying irrigation sub-model into other areas and crops in the world. The study is fallen closely within the scope of ESSD. However, the authors should consider my several concerns below before their submission being accepted

(1) I am wondering how they obtain the crop dryland maps. For wheat or maize, it seem to me the location is constant. I need more detailed information to better understand their study.

(2) I do not think RF is a new method to retrieve SM. That is to say, more interesting findings have ascribed from combining irrigation module into SM estimation model. However, the authors have not specified the point. I am looking forward to more information on it, e.g. the accuracy comparison between with irrigation module and without it.

(3) Deeper and more extent discussions will further expand the reputation and influence of their study.

(4) Generally, the English writing is Ok. But typo can be observed sometimes, a careful check should be conducted throughout their manuscript.