

Comment on **essd-2021-343**

Anonymous Referee #2

Referee comment on "A 30□m annual maize phenology dataset from 1985 to 2020 in China" by Quandi Niu et al., Earth Syst. Sci. Data Discuss.,
<https://doi.org/10.5194/essd-2021-343-RC2>, 2022

This article aims to provide a long-term national maize phenology dataset with a high spatial resolution. The adopted method and newly released dataset should have good application value for crop phenology monitoring and agricultural production management at different regional scales, the main concerns are as follows:

- The maize distribution map may be more consistent compared with land use change map, but it is better to try harder to reduce the impact of the assumption that the maize distribution was regarded as persistent over 30 years, for example, maybe using GEE to get maize classification maps.
- From Fig.8, it is not as described that the correlations of two phenology indicators of summer maize is significantly higher than that of spring maize, or the author may put the wrong figure here.
- Fig.13 does not show that summer maize is more sensitive to temperature and precipitation than spring maize, and this description needs to be supported by quantitative evidence or scientific findings.
- Considering that there are about 10 provinces where summer maize is grown, it may be required to expand the region of interest instead of only selecting Beijing-Tianjin-Hebei area to reveal the impact of climate materials for deeper analysis and better persuasion.