Interactive comment on "Spatial and temporal patterns of plantation forests in the United States since the 1930s: An annual and gridded data set for regional Earth system modeling" *by* Guangsheng Chen et al.

Anonymous Referee #1

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General comments:

This manuscript described a dataset of plantation forests in the US from 1928-2012. The authors synthesized multiple inventory data sources to develop this annual and spatially-explicit plantation dataset. The dataset would be very helpful for large scale Earth ecosystem modeling and planation management.

Data have been deposited at Pangaea website, including a readme file, tree species, gridded planatation distribution, state-level annual tree planting area and plantation area in the conterminous (48 states) in ASCII and ArcGIS grid (8 km x 8 km) formats.

Based on this dataset, the authors showed the changes in plantation forest area from 1928 to 2012, and in different regions for different tree species.

The manuscript was well written and organized. Overall, I think this is a useful dataset and I recommend it to be published.

Specific comments: L152: why add random error Epson_mn here? L234-236: But in reality, some plantation forests might return to naturally-regenerated forests after harvesting. How would this influence planation maps? L264: Plantation Fig. 1: Determining mechanisms. It is not clear what are the mechanisms here?

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