

***Interactive comment on* “The impact of drought on the productivity of two rainfed crops in Spain” by Marina Peña-Gallardo et al.**

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Authors sincerely thank to the three anonymous Referees for their reviews, constructive comments and positive feedback in general. We hope that they find the responses satisfactory.

Anonymous Referee #1

This article is interesting by combining data from different drought indices and yield of two crops at district level in region with water insufficiency. The methods used for statistical analysis of data sets are reasonable and provide an original contribution to the regional crop-loss and drought assessment in Spain. I have a few comments that need clarification before the paper can be considered for publication:

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- Line 127: Please re-write SYR as SYRS. Thank you so much for noticing the typo. It has been changed.

Morover, the short name of the SYRS (standardised yield residuals series) was firstly introduced by Potopova et al. 2015.

Authors thank the notation made by Referee and changed the phrase as follow:

This methodology has been applied in other similar studies (Chen et al., 2016; Tian et al., 2018). First announced as 'SYRS' by Potopová et al., (2015), the full procedure of is described by Lobell and Asner, (2003) and Lobell et al., (2011).

- Please include in sec 2.1 as example plots with temporal trends of wheat and barley (t/ha) and plots with temporal evolution of SYRS of wheat and barley during the study period.

We have added a new supplementary figure as Reviewer suggests illustrating the temporal evolution of SYRS for both crops and the temporal trend of yields (t/ha) in a selected province and an agricultural district from the same province. Boxplots from Figure 2 already illustrate the temporal evolution of yields as a summary of all the provinces and districts analysed.

Thank you so much for the suggestion.

Please, see Supplementary Fig 1. in the new manuscript attached (page n°36).

Please also note the supplement to this comment:

<https://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2019-1/nhess-2019-1-AC1-supplement.pdf>

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