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Interactive comment on "Risk of crop failure due to compound dry and hot extremes estimated with nested copulas" *by* Andreia Filipa Silva Ribeiro et al.

Anonymous Referee #2

Received and published: 20 April 2020

The manuscript 'Risk of crop failure due to compound dry and hot extremes estimated with nested copulas' uses Archimedian copulas to model trivariate joint distributions between maximum temperature, precipitation and wheat and barley yield deviations. The paper is well structured and well written. It contributes interesting new insights to the literature on compound dry and heat impacts on crop yields.

A few comments include:

p.4, l.88: I recommend adding the exact months rather than just naming the seasons. As readers of the paper might come from all over the world, it might not be clear which months include the spring time in Spain. p.6, l.132: The copula parameter θ should be

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[Discussion paper]

introduced

p.8, l.178: Can you interpret what it means that 'C_(u1,u2,u3) is slightly lower than the AIC of C_1 (u3,C_12 (u1,u2))' in terms of compound and single hazards and add a sentence about it?

*Code availability. It is more and more common to publish the code used in scientific publications and I strongly recommend the authors considering to publish their code once the paper is accepted.