

## ***Interactive comment on “Positive feedback of elevated CO<sub>2</sub> on soil respiration in late autumn and winter” by L. Keidel et al.***

**Anonymous Referee #2**

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Keidel et al. analyze the effect of seasonality on soil respiration taking into consideration an increase of CO<sub>2</sub> in the atmosphere. I find their approach of blending phenology and management practices to define a “season” as an interesting and useful “conceptual framework” that can be repeated by the scientific community to answer similar question. This manuscript is well structured and it’s easy to follow.

87558 L 26 it my believe that using phenology and management practices is a nice conceptual framework, however there is consistency that should be taking into account

8758 L 25 will you define it is a season or a period ? either way the use a same nomenclature will help clarify for instance Figure 1 and 3 mention season. In addition winter some times is wintertime (8765 L10, 8766 L9)

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8768 L 22-26 this is very interesting, should we further think in how soil moisture at different layers influence CO<sub>2</sub> dynamics. Would a soil moisture threshold taking into account the seasonality influence the diffusion of CO<sub>2</sub>?, for this particular grassland what is a dry condition/ high soil moisture? And what is a deep layer? Figure 6 missing legend

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