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Interactive comment on "Biogenic isoprenoid emissions under drought stress: Different responses for isoprene and terpenes" *by* Boris Bonn et al.

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General:

Thanks for the nice review and the questions raised. Since the details about the investigation conducted at the plant nursery in Freiburg in 2018 were rather scarce, we will add the following information to the present manuscript in line 170ff: "The distance between the edges of control and stressed group were approximately 10 m with 1 m distance between individual tree stems. Water was added by a watering pot by moderate flows to each of the trees in order to control the amount of water and to minimize the effects on neighboring trees.". The question concerning the soil water status of the

seedlings is important. We have made two approaches, i.e. a) measuring the pre-dawn water potential using a Scholander bomb as well as b) approximating the local soil water content by reference measurements oft he German Weather Service at the same soil conditions ca. 600∼m in distance. The latter method used measurements down to 75 cm soil depth. We considered the water status of the seedlings as key parameter and transferred the derived values to soil water availability (SWA) taking the soil composition into account. By doing so, we hope to get close to the real SWA conditions and marked this by a notable errorbar, derived from the different approaches.

Regarding the minor comments:

L. 47: We'll replace "Kelvin" by "degree Celsius" as the units are only shifted by 273.15 K and slope is not affected.

L. 158-162: The following references will be added to "ROS detoxification/reduction of BVOCs": Niinemets et al. (2014), Parveen et al. (2018), Piechowiak et al. (2019) and Yalcinkaya et al. (2019).

L. 203: Will be done.

References:

Niinemets, Ü., Fares, S., Harley, P. and Jardine, K.J. (2014). Bidirectional exchange of biogenic volatiles with vegetation:emission sources, reactions, breakdown and deposition. Plant Cell Environ. 37, 1790–1809, doi: 10.1111/pce.12322. (already in the manuscript)

Parveen, S., Harun-Ur-Rashid, M., Inafuku, M., Iwasaki, H., and Oku, H. (2018). Molecular regulatory mechanism of isoprene emission under short-term drought stress in the tropical tree Ficus septica. Tree Phys. 39, 440-453, doi: 10.1093/treephys/tpy123. (new)

Piechowiak, T., and Balawejder, M. (2019). Impact of ozonation process on the level of selected oxidative stress markers in raspberries stored at room temperature. Food

Chem. 298, 125093, doi: 10.1016/j.foodchem.2019.125093 (new)

Yalcinkaya, T., Uzilday, B., Ozgur, R., Turkan, I., and Mano, J. (2019). Lipid peroxidation-derived reactive carbonyl species (RCS): Their interaction with ROS and cellular redox during environmental stresses. Environ. Exp. Bot. 165, 139-149, doi: 10.1016/j.envexpbot.2019.06.004. (new)

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