

Interactive comment on “Emissions of terpenoids, benzenoids, and other biogenic gas-phase organic compounds from agricultural crops and their potential implications for air quality” by D. R. Gentner et al.

Anonymous Referee #1

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Lots of data have been presented and analyzed in the manuscript and results show the importance of biogenic VOCs on atmospheric chemistry and air quality. Earlier OH reactivity studies have shown that there are lots of unknown OH reactivity in the atmosphere which is not explained by traditional VOCs e.g. aromatics or monoterpenes. In this study they have also studied several other novel compounds and this is certainly interesting and worth publishing. Therefore I recommend publishing manuscript with minor revisions.

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My main concern was that measurement methods used are well-established for aromatics and monoterpenes, but are they suitable for the all other studied compounds. I would like to see some comment on this (e.g. comment on uncertainties for them). How about losses in ozone traps? Pollmann et al. did not show the suitability of the ozone trap for all these compounds. Did you have standards for all these compounds? Reference Gentner et al. (2012) do not clearly answer for these questions and therefore a few more words about the measurement methods should be added. I think data is worth publishing even if measurement methods have not been carefully validated for all these compounds; however this should be clearly stated in the paper.

Specific comments: How long time plants are averagely flowering? One week in a year or one month? This information would give perspective for the importance of the flowering event.

Page 28359, line 12: should there be 'NO₃' instead of 'NO'. OH radicals have also great impact on diurnal cycles both in spring and summer and this should also be added.

Fig. 1. You tell that not all sesquiterpenes could be quantified, but should it be that they were not identified as you mention in the text.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 28343, 2013.

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