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Interactive comment on "Agricultural uses reshape soil C, N, and P stoichiometry in subtropical ecosystems" *by* H. Y. Liu et al.

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We listed the requests from D.Chen and give the following responses.

Request 1:To enhance concerns, it is necessary to extend the discussion concerning implications of changes in nutrient stoichiometry from agronomic and environmental perspectives Response 1: In our opinion, we addressed these implications reasonably. Below, some discussion given in the manuscript is cited: P.2, Lines of 16-24 "A good example for this involves observations from Hawaii where the results demonstrated that the C:N:P ratio in the soil of a relatively young ecosystem was controlled mainly by the N supply, while that of a relatively old ecosystem was governed mainly by the P supply (Herbert and Fownes, 1995; Vitousek and Farrington, 1997)." P. 9, Lines of 20-27: "It was identified that for ecosystems under native vegetation (i.e., woodland), topogra-

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phy is one of the prime factors determining the spatial distribution and the elemental stoichiometry (C:N, C:P, and N:P molar ratios; Zhang et al., 2011; Hook and Burke, 2000). However, in the agricultural ecosystems, their effects have been submerged (statistically insignificant), due to the relative similarity in cropping and managing (N and P inputs through fertilization), which significantly increases soil N and P contents but narrows C:N, C:P, and N:P molar ratios (Gao et al., 2013; Griffiths et al., 2012; Wang et al., 2014)."

We did not go further with our discussion, as we would not like to be too speculative.

Request 2: Remove "water" in "small water catchments" Response 1: We have revised the manuscript accordingly.

Request 3:What means of the new topography variable "ES"? Response 3: The variable ES was generated by merging the two variables of elevation and slope with the principal component analysis (PCA) method implemented with CANOCO 5.0 software (Microcomputer Power, Ithaca, USA). We used the variable ES to eliminate the collinearity effects of elevation and slope, when analyzing the driving variables of the contents of soil C, N, P and their stoichiometry.

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