

Interactive comment on “Three years of increased soil temperature and atmospheric N deposition have no effect on the N status and growth of a mature balsam fir forest” by L. D’Orangeville et al.

Anonymous Referee #1

Received and published: 4 February 2013

The paper is nicely written and reports a study on soil warming combined with realistic increased N deposition effects in a boreal forest. The study is well designed including replicates and controls. N additions were given on top of the canopies to mimic deposition effects which I found an improvement in relation to application on the ground in other studies.. Surprisingly, little effect of warming and additional N depositions was observed on N availability and growth, questioning some of the conclusions from previous studies. I suggest acceptance of the paper after minor revisions. A few technical comments: Abstract: Add more information: 3 year treatment since 2008, two years of

C40

observations (2010/2011) L 15: add “in year 2010” Results: There is no reference and description of Figure 1 in the results section. The seasonality of growth was a major point in the discussion and should be made clear in the results. The legend of Fig. 1 (meaning of the colors) is not given and the treatment effects cannot be seen. Table 1 can be deleted and the significant results mentioned in the text. In Fig. 3 the unit for available N is $\mu\text{g}/10\text{ cm}^2$ which can hardly be interpreted. Give numbers in kg ha^{-1} . Page 1320: Give company names and location for Technicon and Dionex.

Interactive comment on Biogeosciences Discuss., 10, 1313, 2013.

C41