Questions – N. Vuichard

Crutzen et al, N2O release from agro-biofuel production negates global warming reduction by replacing fossil fuels, ACP, 2008. :   
Q1: How are the N2O emissions by soil estimated in the IPCC methodology.  
Q2: Which approach is used in this paper leading the authors to revisit the IPCC estimates.  
  
Fargione et al., Land Clearing and the Biofuel Carbon Debt, Science, 2008   
Q1: What is the process highlighted in this paper that increases the CO2 emissions of biofuel production  
Q2: What is the definition of the 'carbon debt' ?  
Q3: Based on this study, on which type of lands, the carbon debt of biofuel produciton is the higest ? the lowest ?   
  
Lapola et al., Indirect land-use changes can overcome carbon savings from biofuels in Brazil, PNAS, 2010  
Q1: What are the two types of Land-use changes that are considered in this sutdy. Could you provide a definition for both terms.  
Q2: What are the different models used in this study and what do they simulate ?