Trophic cascades affect Priming Effect and the dynamics of dead organic matter: a theoretical approach

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Résumé

Priming Effect (PE), defined by enhanced decomposition of recalcitrant organic matter following labile organic matter addition, is key to understand decomposition processes. However, brown food webs, based on dead organic matter, have been generally ignored in studies focusing on PE. To investigate the effects of food web structure on PE, we developed a model linking the decomposition of a labile and a recalcitrant pool of organic matter to trophic interactions between organisms. Our results highlight strong cascading effects of the brown trophic chain on PE.