عنوان فارسی مقاله:
سهم تعامل ساز و کارهای زیستی با ثبیت خاکدان‌ها در چمنزارهای بارسازی شده

عنوان انگلیسی مقاله:
CONTRIBUTIONS OF INTERACTING BIOLOGICAL MECHANISMS TO SOIL AGGREGATE STABILIZATION IN RESTORED PRAIRIE
**CONCLUSIONS**

The processes of soil aggregate stabilization are complex and involve a variety of binding mechanisms interacting at a range of spatial scales. By using path analysis to evaluate the roles of several organic binding agents in soil aggregation, we were able to confirm the importance of roots and mycorrhizal hyphae as driving factors for macroaggregate stabilization in a system recovering from disturbance. In addition, we obtained a better understanding of the underlying mechanisms associated with the various binding agents in this system. In particular, very fine roots appeared to be involved primarily in direct effects such as physical enmeshment; whereas, the effects of fine roots were largely indirect, through their strong associations with mycorrhizal fungi and their influence on microbial activity. Furthermore, analyses for three size classes of macroaggregates support the hypothesis that the effectiveness of various binding mechanisms depends on the physical dimensions of the binding agents relative to the spatial scales of the aggregate planes of weakness being bridged.