

Module Title: **Soil Organic Matter Dynamics and Management**

Instructor: Dr. D. Lynch, Dept. Plant, Food and Environmental Sciences
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Dates module will be offered: Fall 2020. November to early December.

Frequency of formal classes/meetings: Two 1.5 hour meetings/week for 4 weeks (via Zoom. Time TBD)

Module Content and Learning Objectives: A review of our current understanding of organic matter distribution, storage and dynamics in soil, and the tools (physical and biological fractionation techniques, C isotopes and conceptual 'pools' or models) used to help characterize it. Particular emphasis will be placed on discussion of the mechanisms and potential of soil C sequestration, and the impact of management practices (cropping systems, tillage, amendments) and edaphic factors on soil organic matter dynamics.

Method of Evaluation: Each student will be expected to participate with questions and comments related to lectures and lead discussion on selected readings. The final presentations (~15minutes) will include material from the major essay written by each student.

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| 1) Essay | 40% |
| 2) Presentation of paper | 20% |
| 3) Participation in discussions | 40% |

Any restrictions on enrollment: No restrictions.