CARBON FLUX

Mowing down

Landscape Urban Plan. **182**, 114–123 (2019).

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While urban areas continue to grow in both the developed and developing world — seemingly replacing green spaces — household lawns continue to make up a considerable portion of residential space, covering more than 163,000 km² of the United States alone. Such lawns have their own cycle of fertilization, growth, and maintenance, the latter still mostly done by gas-powered machines such as lawn mowers.

Susannah Lerman and Alexandra Contosta at the University of Massachusetts studied whether the frequency of mowing a lawn affects its carbon emissions in conjunction with biogenic factors, such as soil temperature, respiration and the amount of tree canopy in the yard. Mowing

three lawns at timeframes of every one, two or three weeks, the authors found that soil variables were affected more by each other and other biogenic factors than by mowing frequency or the height of the grass. The CO₂ emissions for the soil did not vary significantly between treatments, though emissions from the lawn mower decreased substantially when used at a lower frequency. The authors believe that less intensive mowing may also benefit emissions by allowing for taller grass to sequester more carbon into the soil.

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