Original article

EDN OZNSWZ DOI 10.24419/LHI.2304-3083.2025.4.10

## The Effect of Deciduous Wood Chips on Soil Organic Matter

Marina S. Rozanova¹ Candidate of Biological Sciences

Gennady R. Vasiliev<sup>2</sup>

Sergey L. Rysin<sup>3</sup>

Candidate of Biological Sciences

Kirill A. Gorokhov4

Tatiana V. Prokof'eva<sup>5</sup>

Candidate of Biological Sciences

**Abstract.** The properties of sod-podzolic soils (Albic Retisols) of the MBG RAS under the influence of hardwood chips used to cover the path network have been studied. The low fermentative activity, an increase in the content of organic matter and labile humic substances at the initial stages of the existence of chip coating were found in upper soil horizons. Based on the results of a 2-year experiment and observations of a covered path in the arboretum of the GBS, it can be argued that the coating of hardwood chips has little effect on the enzymatic activity and organic matter of the soil under the paths and in their immediate vicinity. On the periphery of the paths covered with wood chips, this effect can be described as weakly positive.

Key words: hardwood chips, Albic Retisols, soil organic matter, fermentative activity.

For citation: Rozanova M., Vasiliev G., Rysin S., Gorokhov K., Prokof'eva T. The Effect of Deciduous Wood Chips on Soil Organic Matter. – Text: electronic // Forestry Information. 2025. № 4. P. 152–160. DOI 10.24419/LHI.2304-3083.2025.4.10. https://elibrary.ru/oznswz.

<sup>&</sup>lt;sup>1</sup> Lomonosov Moscow State University (MSU), Senior Lecturer at the Department of Soil Science (Moscow, Russian Federation), rozanova ms@mail.ru

 $<sup>^2 \,</sup> Lomonosov \, Moscow \, State \, University \, (MSU), \, 2^{nd} \, year \, Master's \, Student \, of \, the \, Faculty \, of \, Soil \, Science \, (Moscow, \, Russian \, Federation), \, gena\_vasilev\_02@bk.ru$ 

<sup>&</sup>lt;sup>3</sup> Tsitsin Main Botanical Garden of the Russian Academy of Sciences, Head of the Dendrology Laboratory (Moscow, Russian Federation), ser-rysin@yandex.ru

<sup>&</sup>lt;sup>4</sup>Lomonosov Moscow State University, 2<sup>nd</sup> year Master's Student of the Faculty of Soil Science (Moscow, Russian Federation), gorki0211@gmail.com

 $<sup>^5</sup>$ Lomonosov Moscow State University, Associate Professor, Department of Soil Science (Moscow, Russian Federation), tatianaprokofieva@yandex.ru