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Data Article

# Data on litter quality of host grass plants with and without fungal endophytes

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ABSTRACT

Certain Pooideae species form persistent symbiosis with fungal endophytes of *Epichloë* genus. Although endophytes are known to impact the ecology and evolution of host species, their effects on parameters related with quality of plant biomass has been elusive. This article provides information about parameters related with the quality of plant litter biomass of two important grass species (*Schedonorus phoenix* and *Schedonorus pratensis*) affected by the symbiosis with fungal endophytes (*Epichloë coenophiala* and *Epichloë uncinata*, respectively). Four population origins of *S. phoenix* and one of *S. pratensis* were included. Mineral, biochemical and structural parameters were obtained from three samples per factors combination [species (and population origin) × endophyte]. This data can be potentially used in other studies which, by means of 'data reanalyzing' or meta-analysis, attempt to find generalizations about endophyte effects on host plant litter biomass. The present data is associated with the research article "Role of foliar fungal endophytes on litter decomposition among species and population origins" (Gundel et al., In preparation) [1].

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**Specifications Table**

| | |
|---|---|
| Subject area | *Biology* |
| More specific subject area | *Plant-microbe interaction* |
| Type of data | *Tables and figures* |
| How data was acquired | *Minerals: ICP-OES (inductively coupled plasma optical emission spectrometry) method. C and N: dry combustion (Dumas) method by Leco TruMac CN- analyzer, Leco Corporation, USA. ADF and ADL: Ankom Automated Fiber Analyzer A2000. Alkaloids: HPLC.* |
| Data format | *Raw and filtered* |
| Experimental factors | *Plant species and origin, and symbiosis with fugal endophyte* |
| Experimental features | *Three plant tissue samples per combination of experimental factors were analyzed for mineral, biochemical and structural characterization.* |
| Data source location | *Ruissalo Botanical Garden, University of Turku, Finland* |
| Data accessibility | Data are presented in this article. |

**Value of the data**

- The data present detailed information about effects of fungal endophytes on parameters related with litter biomass quality in two host grass species (two cultivars and three wild populations).
- Mineral, biochemical, and structural characteristics of biomass quality determine, among other ecological processes, litter decomposition in nature.
- This detailed information can be reused in future works looking for general patterns of fungal endophyte effects on host biomass quality and litter decomposition.

## 1. Data

Raw data of mineral, biochemical (alkaloids) and structural characterization of biomass litter produced by two plant species and populations [*Schedonorus pratensis*: the cultivar 'Kasper' (from Finland); and *Schedonorus phoenix*: the cultivar Kentucky-31 (from U.S.) and three wild origin (Gotland, Åland and Södermanland)] with (E+) and without (E−) fungal endophytes are presented in the included excel file online appendix. The file contains three sheets. The sheet 'Chemistry' contains the results of all analyzed minerals (Ca, Cu, Fe, K, Mg, Mn, P, S, and Zn) and structural parameters (Dry matter, Ash, ADF and ADL) in the three processed samples per population [i.e. each combination of species (population) and endophyte]. The next sheet 'N and C', presents results from three samples per population of percentage of nitrogen and carbon for each population. Finally, the sheet 'Alkaloids' contains results of alkaloid concentration (i.e. peramine and ergovaline) in E+ population (two analyzed samples per population) and a control analysis to confirm that E− populations were free of alkaloids. In this paper, Figs. S1 and S2 show mean values of each parameter (Fig. S1: K, S, P, Mn, Mg, Ca, Cu, Fe and Zn; and Fig. S2: Dry matter, ash, ADF and ADL) for each population (Figs. S1 and S2). Data of nitrogen, carbon, and C:N ratio are presented in the associated research article [1].