Metadata information- description of the 3 data files.

"**ALL DATA**"

-**Column P** "Herbivore growth rate". NA values correspond to plants that were not inoculated with herbivores; therefore the herbivore growth rate could not be calculated.

-**Column U-AG** corresponds to all the different alkaloid types produced by the different endophyte strains; therefore "**NA**" in the data set denotes the lack production of the specific alkaloid type.

Specifically, **perennial ryegrass infected with endophyte strain AR37** produces epoxyjanthitrems: epoxyjanthitriol (E Jantriol) (Column U "**EJS**"), and epoxyjanthitrems I–IV (Columns V-Z "**E.JANS, E.JANIS, E.JANIIS, E.JANIIIS, E.JANIVS**").

Perennial ryegrass infected with strain AR1 produces only peramine (Column AB "**PERS**"),

Perennial ryegrass infected with WT *Epichloë*-strain produces ergovaline (Column AA "**ERGOS**", peramine (Column AB "**PERS**"), and lolitrem B (Column AC "**LOLBS**").

Tall fescue infected with AR584 produces peramine (Column AB "**PERS**), total loline (Column AD "**LOLIS**") and the three loline derivatives: N-acetylloline (NAL) (Column AE "**NALS**"), N-acetylnorloline (NANL) (Column AF "**NANLS**"), and N-formylloline (NFL) (Column AG "**NFLS**").

-**Column AH-AL** corresponds to values of shoot nitrogen, carbon, hydrogen, carbon to nitrogen ratio, and % silicon; NA values correspond to plants that were not analyzed, only a sub-set of samples were done per treatment.

"**FES.ES**" and "**RYE.ES**" data sets were utilized to perform the standardised effect sizes (SES; Hedges' d) for tall fescue "**FES.ES**" and perennial ryegrass "**RYE.ES**" respectively in order to compare the magnitude of the effect of Si supply and herbivory on strain-specific alkaloid production in foliar tissue.

As described in the manuscript each strain produces different alkaloid types, therefore "**NA**" in the data set denote the lack production of the specific alkaloid type. Specifically:

-Tall fescue infected with AR584 (file "**FES.ES**"**)** was analysed for peramine (Column G "**AR584.PER**") and the three loline derivatives: N-acetylloline (NAL) (Column H "**AR584.LOLI**"), N-acetylnorloline (NANL) (Column I "**AR584.NANL**"), and N-formylloline (NFL) (Column J "**AR584.NFL**").

-For perennial ryegrass infected with AR1 ("**RYE.ES**"**)**, only peramine was analysed (Column G "**AR1.PER**"),

-For perennial ryegrass infected with AR37 ("**RYE.ES**"**)**, analysis was undertaken for all five epoxyjanthitrems: epoxyjanthitriol (E Jantriol) (Column H "**AR37.EJ**"), and epoxyjanthitrems I–IV (Columns I-M "**AR37.EJAN, AR37.EJANI, AR37.EJANII, AR37.JANIII, AR37.EJANIV**").

-For perennial ryegrass infected with WT *Epichloë*-strain ("**RYE.ES**"**)**, peramine (Column N "**WT.PER**") ergovaline (Column O "**WT.ERGO**") and lolitrem B (Column P "**WT.LOLB**") was analysed.