README file for eDiValo seedling trait project

Project consists of five data files:

toothpick\_seedling\_data\_2020\_all.csv, field surveys of planted seeds

natural\_regen, field surveys of naturally regenerating seedlings

seedling\_trait\_size, measurements of lab-grown seedlings with above- and below-ground length, above- and below-ground biomass, and calculated total biomass, and root-to-shoot ratios for biomass and length.

seedling\_trait\_SLA, measurements of first three real leaves of lab-grown seedlings with biomass in mg, and size in pixels. Pixel to area conversion: 10cm = 1173 pixels, 1mm = 11.73 pixels, 1mm^2 = 137.6 pixels. Area in mm^2 area is calculated by dividing the pixel area by 137.6.

seedling\_trait\_CN, % Carbon and % Nitrogen measurements of lab-grown seedlings. Sample milling by AL, weighing by CW, analysis by Petra Hoffman (PhyDiv lab manager). Analyses conducted in August 2020 (except xx species....)

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| *Sample preparation:* | ground in a ball mill (MM2000, Retsch GmbH) |
|  | dried at 70°C (UF750, Memmert) |
| *Measuring instrument:* | Vario EL cube (Elementar Analysensysteme GmbH) |
| *Carrier gas:* | Argon |
| Gas seperation: | Adsorption columns (purge and trap CO2; SO2) |
| *Detector:* | Thermal Conductivity Detector (TCD) |
| *Sample weight:* | 5-15 mg |

Lab seedlings were grown in spring of 2019, except xx species which were grown in 2020. Seedlings were grown in growth chambers (include specific settings). Size measurements were taken two weeks after germination, after drying and weighing the above-ground portions of these samples were ground and analyzed for carbon and nitrogen concentration. SLA was measured once three real leaves (not cotyledons) had emerged.