ETH zürich

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# Effect of ley botanical composition on the quantity, quality and distribution of residual N along the soil profile, and carry over effects on the establishment of the follow-on crop

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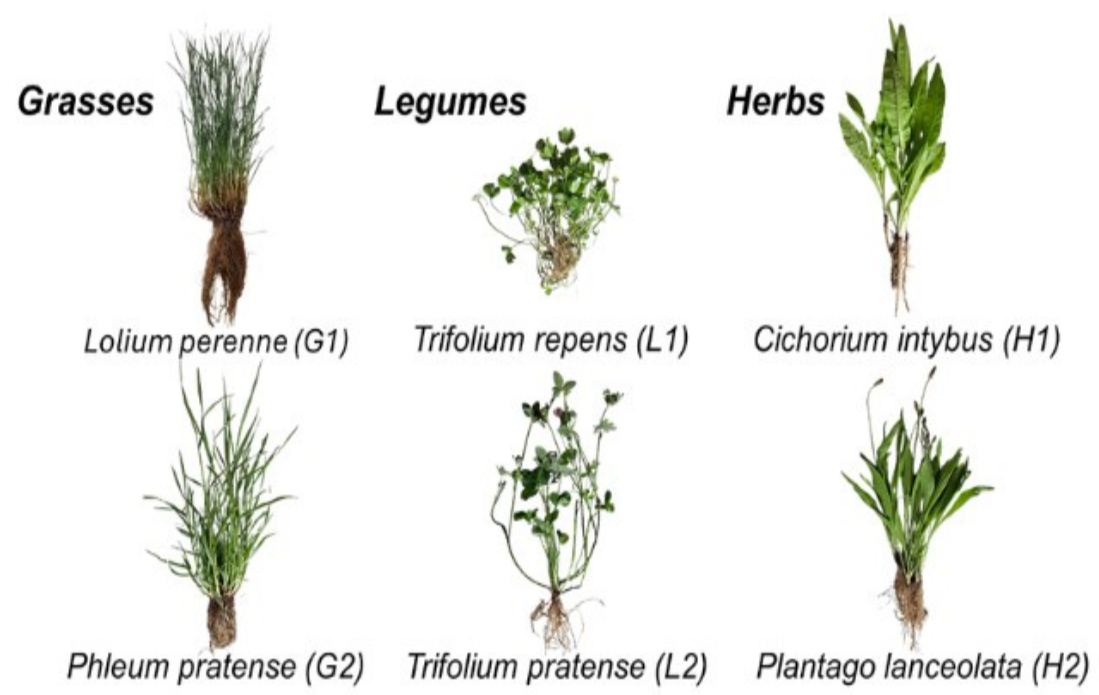
## Introduction

Multi-species leys in crop rotations can offer various advantages in agricultural systems, including high yields, N efficiency, maintenance of soil organic matter, and reduced dependency on off-farm inputs.

## Research objective

Quantifying the effects of grassland ley botanical composition on plant above-and belowground biomass production and processes related to the provision of residual N to the follow-on crop.

## Target species




## Research design

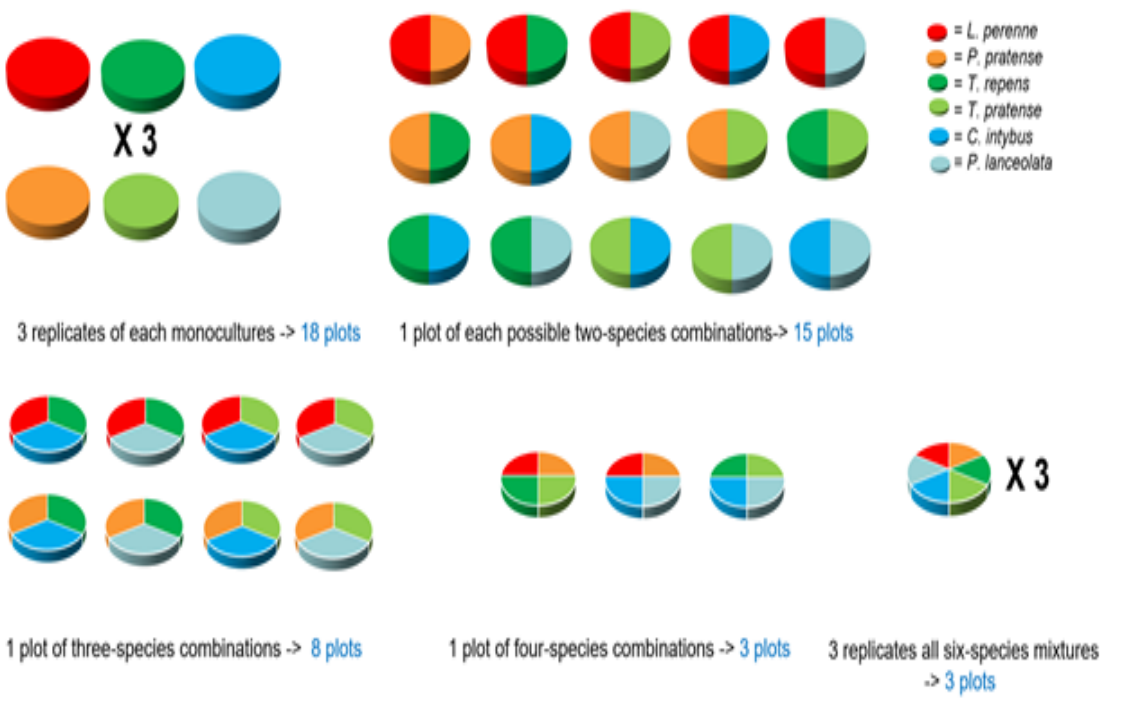



Figure 1: Diagram illustrating the treatments with different species richness in the plant communities of the grassland leys. Each species is represented by a distinct color and the relative abundance of each color represents the targeted proportion in the plots. The experimental plots are completely randomized on the site, with monocultures and the six-species mixture being replicated three times.

## Concept

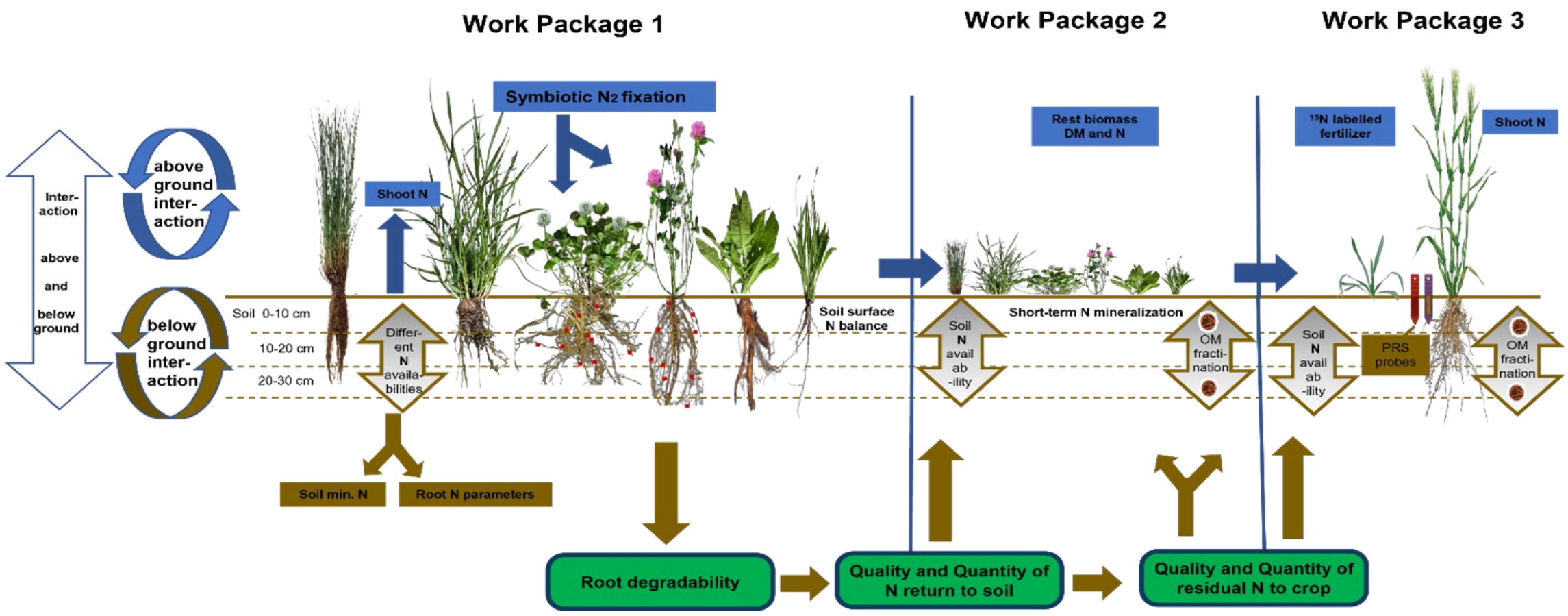



Figure 2: Diagram explaining the processes and concepts behind present study into the three different work packages. Further, important measurements to understand the nitrogen mechanisms in each phase are also mentioned.

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