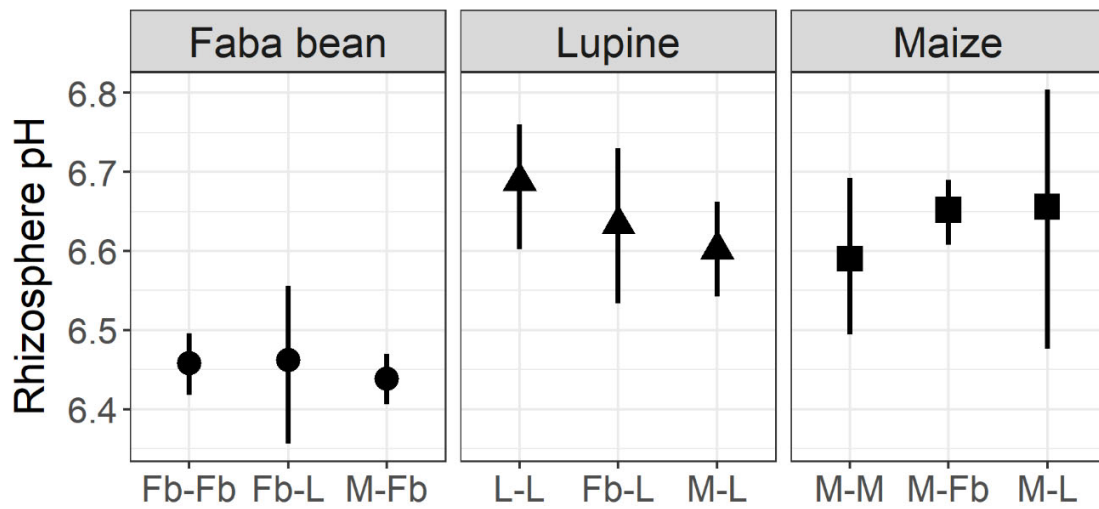


Supplementary Fig. 1: Daily precipitation and mean temperature (°C) during the experimental period.



Supplementary Fig. 2. Rhizosphere pH of each crop species in mono and mixed cultures. Presented are the means and 95% confidence intervals using non-parametric bootstrapping with 10000 iterations. M-L: maize+lupine mixed culture, M-Fb: maize+faba beam mixed culture, Fb-L: faba bean+lupine mixed culture, Fb-Fb: faba bean monoculture, L-L: lupine monoculture, M-M: maize monoculture.

Supplementary table 1. Shoot dry biomass ( $\text{kg m}^{-2}$ ), total shoot P uptake ( $\text{mg P plant}^{-1}$ ), and total shoot N uptake ( $\text{mg N plant}^{-1}$ ). Presented are mean of 5 replicates with standard errors.

Cropping Systems	Crop Combinations	Crop Species	Shoot biomass ( $\text{kg m}^{-2}$ )	Shoot P uptake ( $\text{mg P plant}^{-1}$ )	Shoot N uptake ( $\text{mg N plant}^{-1}$ )
Mixedculture	Faba bean-Lupine	Faba bean	18.873±0.55	82.59±6.69	807.60±23.21
Mixedculture	Faba bean-Lupine	Lupine	18.252±1.47	54.65±4.31	741.84±59.31
Mixedculture	Maize-Faba bean	Faba bean	17.938±0.47	71.01±3.68	697.94±44.00
Mixedculture	Maize-Faba bean	Maize	44.846±2.54	150.97±8.31	1323.12±57.50
Mixedculture	Maize-Lupine	Lupine	17.907±3.96	60.79±12.40	728.98±141.60
Mixedculture	Maize-Lupine	Maize	47.232±3.42	176.23±17.03	1590.12±129.89
Monoculture	Faba bean-Faba bean	Faba bean	15.96±0.99	59.18±5.78	644.30±58.33
Monoculture	Lupine-Lupine	Lupine	17.403±0.93	60.96±4.74	754.58±44.01
Monoculture	Maize-Maize	Maize	42.51±1.69	177.02±12.33	1542.64±76.44