

Table S1. PERMANOVA analysis of the fungal community in the three years of study (September-April cycles) as a function of crop nutrition.

| Global test | | | Pairwise test | | |
|--------------|----------|-----------------|---------------|-------------|--------|
| Sampling | Pseudo-F | <i>p</i> -value | Treatments | t-statistic | P(MC) |
| Origin | 1.6251 | 0.1147 | Test vs IF | 1.1502 | 0.3077 |
| | | | Test vs PD | 1.3067 | 0.2116 |
| | | | PD vs Test | 1.3463 | 0.1976 |
| End Season 1 | 2.552 | 0.0048 | Test vs IF | 1.1646 | 0.2644 |
| | | | Test vs PD | 1.7549 | 0.0435 |
| | | | PD vs Test | 1.8049 | 0.0289 |
| End Season 2 | 4.1707 | 0.0045 | Test vs IF | 0.8631 | 0.5517 |
| | | | Test vs PD | 2.6264 | 0.0062 |
| | | | PD vs Test | 2.6269 | 0.0036 |
| End Season 3 | 1.081 | 0.3865 | Test vs IF | 0.6530 | 0.6829 |
| | | | Test vs PD | 1.1025 | 0.3253 |
| | | | PD vs Test | 1.3161 | 0.1938 |

Inorganic fertilization (IF); tomato plant debris (PD); no fertilization (Test).

Table S2. Stepwise linear regression models evaluating the prediction of growth variables of tomato and cucumber seedlings grown in controlled chamber conditions.

| | Predicted variable | Adjusted R ² | s ² , df | Predictor variable | β | Partial t test, <i>p</i> -value |
|----------|--------------------------------|-------------------------|---------------------|-------------------------------|----------------|---------------------------------|
| Tomato | Nº of leaves | 0.112 | 0.52541, 33 | Constant | 4.443±0.028 | <0.001 |
| | | | | HCO ₃ ⁻ | -0.064±0.028 | 0.028 |
| | Height | 0.202 | 0.98328, 33 | Constant | 1.820±1.321 | 0.177 |
| | | | | C/N | 0.718±0.232 | 0.004 |
| | Aerial dry weight ¹ | - | - | - | - | - |
| | Roots dry weight | 0.276 | 0.01865, 32 | Constant | -0.024±0.027 | 0.365 |
| | | | | C/N | 0.016±0.005 | 0.002 |
| | | | | Clay | -0.003±0.001 | 0.016 |
| | Leaf area | 0.108 | 8.25302, 33 | Constant | 15.128±5.100 | 0.006 |
| | | | | Nt | 127.243±56.168 | 0.030 |
| Cucumber | Nº of leaves | 0.343 | 0.40582, 33 | Constant | 2.400±0.808 | 0.006 |
| | | | | HCO ₃ ⁻ | -0.071±0.022 | 0.003 |
| | | | | SOM | 0.843±0.357 | 0.025 |
| | | | | C/N | 0.211±0.098 | 0.039 |
| | Height | 0.133 | 0.38085, 33 | Constant | 4.213±0.007 | <0.001 |
| | | | | Silt | 0.018±0.007 | 0.018 |
| | Aerial dry weight ¹ | - | - | - | - | - |
| | Roots dry weight | 0.106 | 0.01761, 33 | Constant | 0.023±0.024 | 0.338 |
| | | | | C/N | 0.009±0.004 | 0.031 |
| | Leaf area | 0.249 | 12.19180, 32 | Constant | 77.514±16.90 | <0.001 |
| | | | | HCO ₃ ⁻ | -1.815±0.642 | 0.008 |
| | | | | K+ | 0.019±0.008 | 0.022 |

¹: Note that a model to predict roots dry weight of tomato seedlings could not be calculated, as none of the variables were selected during the regression

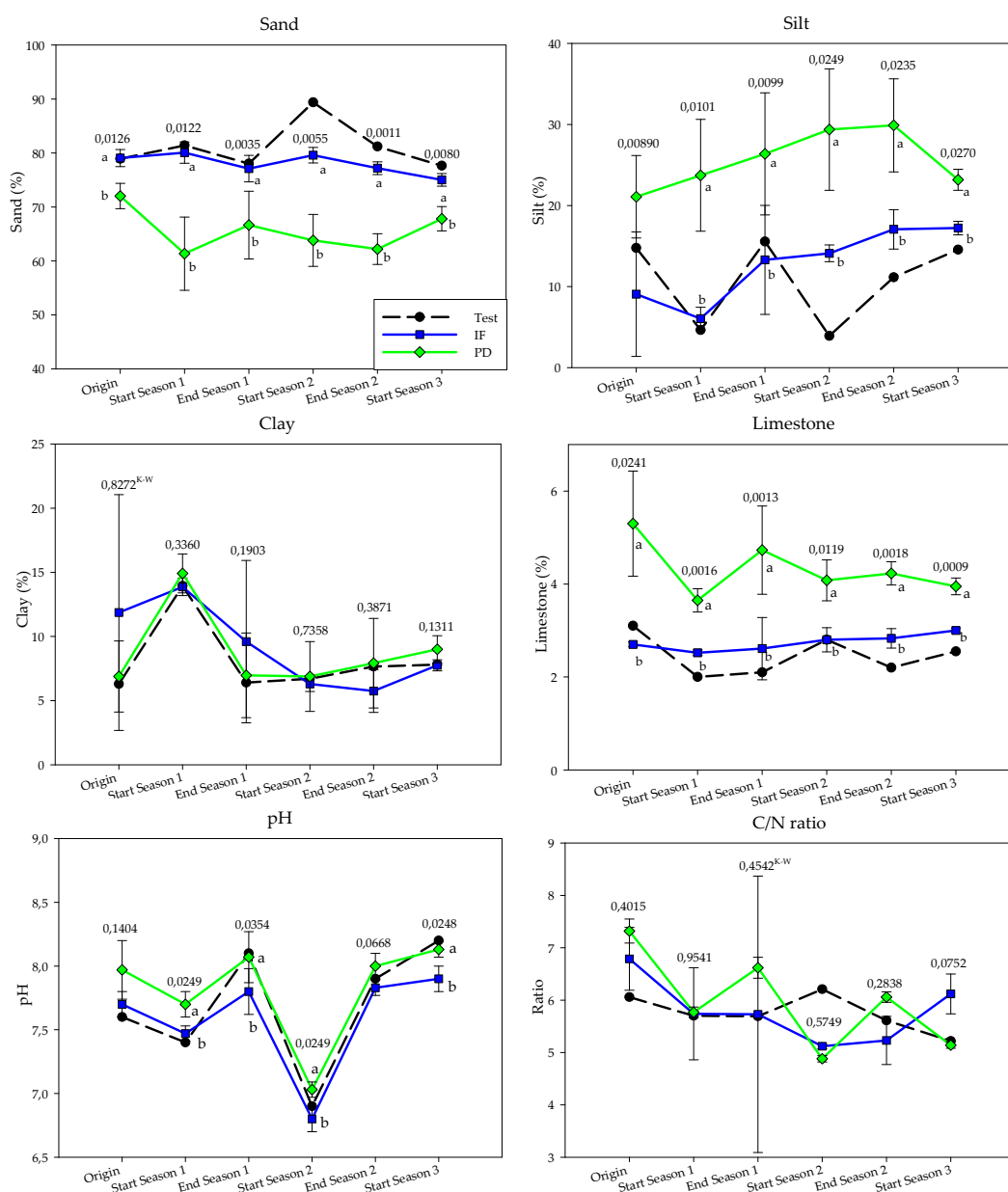


Figure S1. Soil physicochemical parameters in the three years of study (September-April cycles) as a function of crop nutrition. Inorganic fertilization (IF; n=3); tomato plant debris (PD; n=3); no fertilization (Test; n=1). Values (mean \pm standard deviation). Different letters indicate significant differences between IF and PD ($p \leq 0.05$, Student's t -test; $K-W$: test Kruskal-Wallis test).

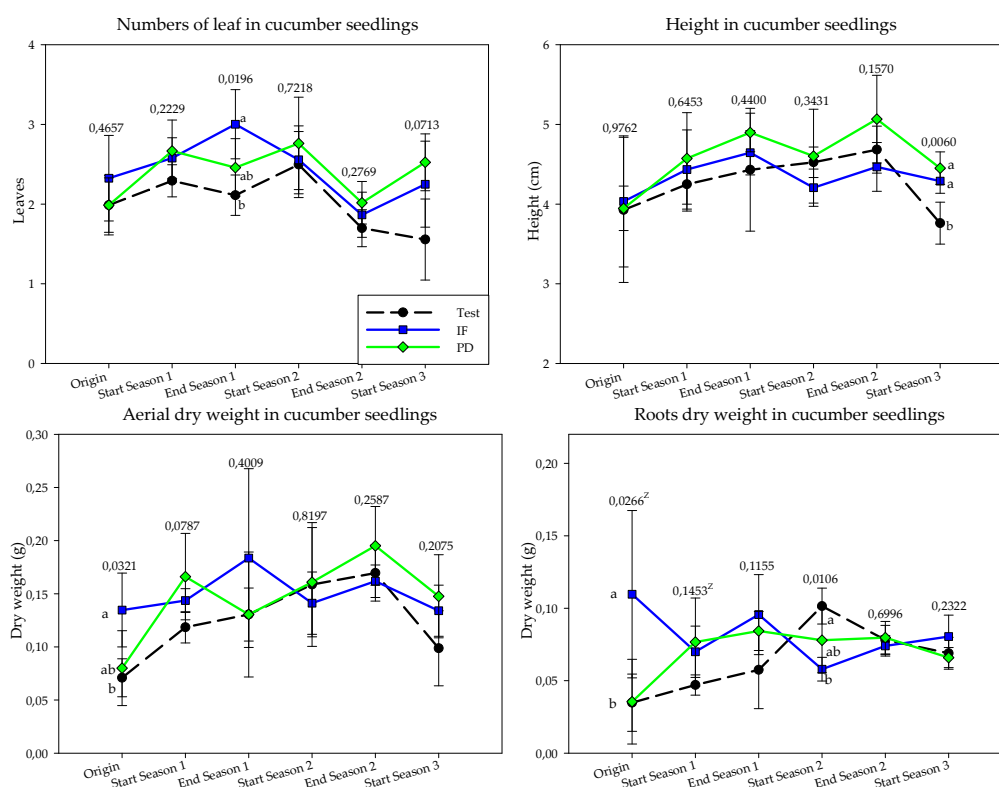


Figure S2. Number of leaves, height and root and aerial dry weight of cucumber seedlings grown in controlled chamber conditions in the three years of study (September-April cycles) as a function of crop nutrition. Tomato. Inorganic fertilization (IF; n=4); tomato plant debris (PD; n=4); no fertilization (Test; n=4). Values (mean \pm standard deviation). Different letters indicate significant differences ($p \leq 0.05$, Tukey's HDS test; $Z: \sqrt{x}$).

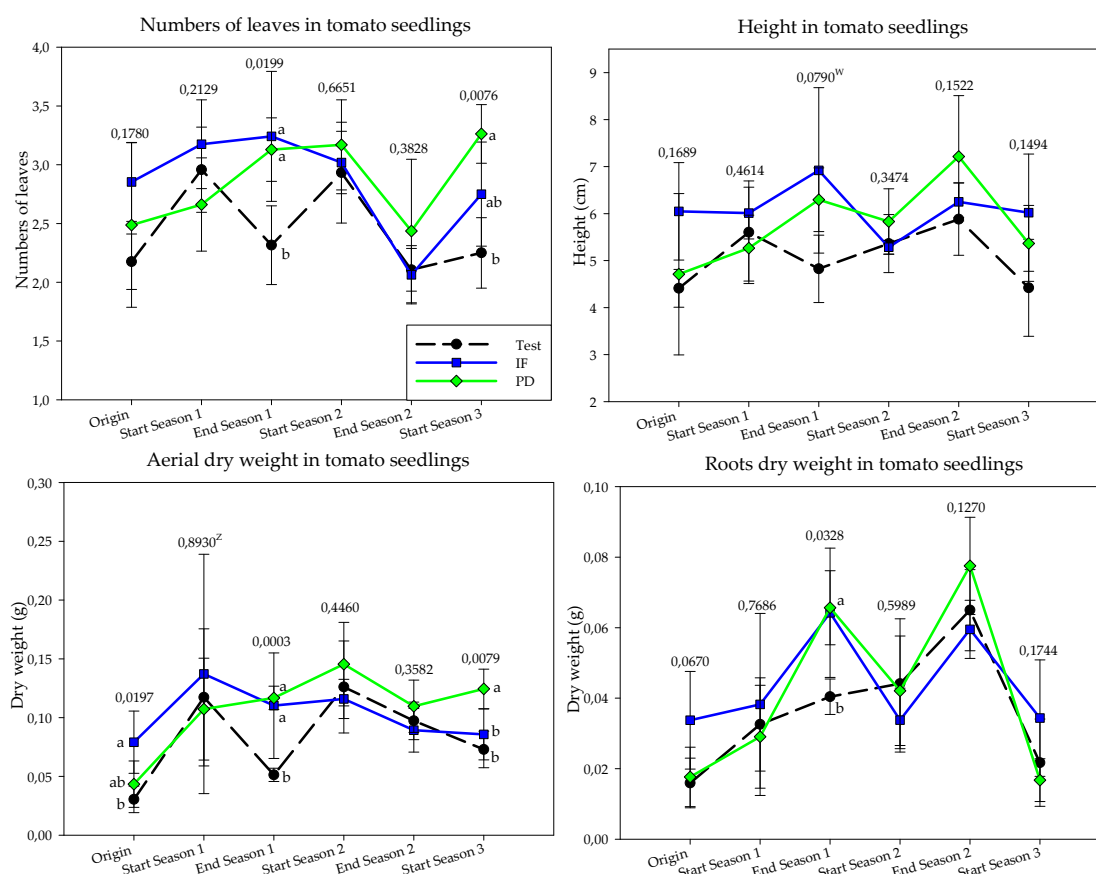


Figure S3. Number of leaves, height and root and aerial dry weight of tomato seedlings grown in controlled chamber conditions in the three years of study (September-April cycles) as a function of crop nutrition. Tomato. Inorganic fertilization (IF; n=4); tomato plant debris (PD; n=4); no fertilization (Test; n=4). Values (mean \pm standard deviation). Different letters indicate significant differences ($p \leq 0.05$, Tukey's HDS test; $^w: \frac{1}{\log(x)}$; $^z: \sqrt{x}$).