*Supplementary Materials*

**Journal of Elementology**

**The multifaceted response of lettuce (*Lactuca sativa* L.) to biofortification with iron**

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**Table of content**

Tabele S1Pearson’s coefficients for the correlation between variables

Table S2 r-Pearson coefficients for correlation between fiber and elements content

Table S1

r-Pearson’s coefficients for the correlation between variables (>0,63 singificant at p=0.05)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Fe treatment | Yield of dry matter  (gplant) | Fe uptake | Mn uptake | Ni uptake | Zn uptake | Mg uptake | Ca uptake | Fe content in d.m.  (mg100g-1) | Mn content in d.m.  (mg100g-1) | Ni content in d.m.  (µg100g-1) | Zn content in d.m.  (mg100g-1) | Mg content in d.m.  (mg100g-1) | Ca content  in d.m.  (mg100g-1) | Fe bioacessibility  (%) | Mn bioacessibility  (%) | Ni bioacessibility  (%) | Zn bioacessibility  (%) | Mg bioacessibility  (%) | Ca bioacessibility  (%) |
| Fe treatment | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Yield of dry matter (g/plant) | 0.81 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fe uptake | 0.99 | 0.83 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mn uptake | 0.82 | 0.98 | 0.85 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ni uptake | 0.61 | 0.77 | 0.61 | 0.67 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Zn uptake | 0.83 | 0.98 | 0.86 | 0.99 | 0.65 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mg uptake | 0.82 | 0.99 | 0.84 | 0.99 | 0.72 | 0.99 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ca uptake | 0.80 | 0.99 | 0.82 | 0.99 | 0.76 | 0.97 | 1.00 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |  |
| Fe content in d.m. (mg100g-1) | 0.81 | 0.35 | 0.81 | 0.39 | 0.27 | 0.41 | 0.37 | 0.34 | 1.00 |  |  |  |  |  |  |  |  |  |  |  |
| Mn content in d.m. (mg100g-1) | 0.83 | 0.95 | 0.86 | 0.99 | 0.60 | 0.98 | 0.98 | 0.97 | 0.42 | 1.00 |  |  |  |  |  |  |  |  |  |  |
| Ni content in d.m. (µg100g-1) | - 0.31 | - 0.39 | -0.34 | -0.49 | 0.28 | -0.52 | -0.44 | -0.39 | - 0.09 | - 0.55 | 1.00 |  |  |  |  |  |  |  |  |  |
| Zn content in d.m. (mg100g-1) | 0.50 | 0.45 | 0.55 | 0.56 | -0.09 | 0.63 | 0.52 | 0.46 | 0.39 | 0.63 | - 0.80 | 1.00 |  |  |  |  |  |  |  |  |
| Mg content in d.m. (mg100g-1) | 0.82 | 0.95 | 0.83 | 0.98 | 0.66 | 0.97 | 0.98 | 0.97 | 0.37 | 0.98 | - 0.48 | 0.57 | 1.00 |  |  |  |  |  |  |  |
| Ca content in d.m. (mg100g-1) | - 0.11 | - 0.13 | -0.13 | 0.01 | -0.16 | -0.08 | -0.02 | -0.01 | - 0.19 | 0.05 | - 0.02 | 0.10 | 0.11 | 1.00 |  |  |  |  |  |  |
| Fe bioacessibility(%) | - 0.44 | 0.12 | -0.43 | 0.06 | 0.06 | 0.08 | 0.10 | 0.13 | - 0.85 | 0.03 | - 0.17 | - 0.05 | 0.09 | 0.14 | 1.00 |  |  |  |  |  |
| Mn bioacessibility (%) | 0.61 | 0.83 | 0.61 | 0.74 | 0.57 | 0.82 | 0.78 | 0.78 | 0.15 | 0.71 | - 0.46 | 0.44 | 0.73 | - 0.33 | 0.30 | 1.00 |  |  |  |  |
| Ni bioacessibility(%) | 0.72 | 0.88 | 0.73 | 0.90 | 0.44 | 0.92 | 0.90 | 0.89 | 0.25 | 0.91 | - 0.71 | 0.67 | 0.91 | 0.05 | 0.21 | 0.86 | 1.00 |  |  |  |
| Zn bioacessibility(%) | - 0.20 | 0.29 | -0.20 | 0.15 | 0.41 | 0.18 | 0.22 | 0.28 | - 0.61 | 0.07 | 0.10 | - 0.25 | 0.16 | 0.00 | 0.83 | 0.47 | 0.25 | 1.00 |  |  |
| Mg bioacessibility(%) | 0.70 | 0.88 | 0.69 | 0.82 | 0.65 | 0.86 | 0.86 | 0.87 | 0.22 | 0.81 | - 0.42 | 0.44 | 0.86 | - 0.02 | 0.28 | 0.88 | 0.88 | 0.50 | 1.00 |  |
| Ca bioacessibility(%) | 0.68 | 0.96 | 0.68 | 0.88 | 0.81 | 0.89 | 0.92 | 0.93 | 0.17 | 0.83 | - 0.29 | 0.27 | 0.86 | - 0.24 | 0.29 | 0.89 | 0.82 | 0.50 | 0.89 | 1.00 |

Table S2

r-Pearson coefficients for correlation between fiber and elements content

(> 0.67 significant at p=0.05)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Element content | |  | | --- | | Total fiber | | |  | | --- | | Soluble fiber | |
| |  | | --- | | Fe content in dm (mg100g-1) | | 0.489 | 0.117 |
| |  | | --- | | Mn content in dm (mg100g-1) | | 0.753 | 0.655 |
| |  | | --- | | Ni content in dm (ug100g-1) | | -0.661 | -0.539 |
| |  | | --- | | Zn content in dm (mg100g-1) | | 0.769 | 0.295 |
| |  | | --- | | Cu content in dm (ug100g-1) | | -0.163 | 0.214 |
| |  | | --- | | Mg content in dm (mg100g-1) | | 0.682 | 0.626 |
| |  | | --- | | Ca content in dm (mg100g-1) | | 0.209 | 0.246 |
| |  | | --- | | Na content in dm (mg100g-1) | | -0.418 | -0.459 |
| K content in dm (mg100g-1) | 0.063 | -0.246 |