**Supplemental material**

**Ferric Chloride Amendment Reduces Phosphorus Losses from Flooded Soil Monoliths to Overlying Floodwater**

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This section contains seven pages with six tables**.**

**Table S1. ANOVA results for soil redox potential (Eh), porewater pH, porewater and floodwater dissolved reactive P (DRP) concentrations by soil**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Soil | Effect | DF | Eh | Porewater pH | Porewater DRP | Floodwater DRP |
| F value | Probability | F value | Probability | F value | Probability | F value | Probability |
| 1 | Days after flooding (DAF) | 8 | 10.0 | <.0001 | 22.4 | <.0001 | 8.4 | <0.0001 | 2.9 | 0.0133 |
|  | Treatment† | 2 | 0.4 | 0.6986 | 68.4 | <.0001 | 58.3 | 0.0001 | 8.2 | 0.0190 |
|  | DAF × Treatment | 16 | 1.0 | 0.48 | 10.0 | <.0001 | 3.8 | 0.0002 | 2.6 | 0.0102 |
| 2 | DAF | 8 | 14.4 | <.0001 | 31.5 | <.0001 | 8.1 | <0.0001 | 4.2 | 0.0010 |
|  | Treatment | 2 | 1.0 | 0.4323 | 120.1 | <.0001 | 5.1 | 0.0515 | 1.5 | 0.2947 |
|  | DAF × Treatment | 16 | 1.2 | 0.3321 | 3.9 | 0.0039 | 3.3 | 0.0006 | 0.9 | 0.5299 |
| 3 | DAF | 8 | 5.9 | 0.0007 | 17.5 | <.0001 | 1.8 | 0.1097 | 1.7 | 0.1186 |
|  | Treatment | 2 | 1.4 | 0.3097 | 51.5 | 0.0002 | 3.9 | 0.0804 | 10.2 | 0.0117 |
|  | DAF × Treatment | 16 | 1.0 | 0.4844 | 11.6 | <.0001 | 0.7 | 0.7653 | 2.5 | 0.0072 |
| 4 | DAF | 8 | 12.1 | <.0001 | 2.44 | 0.0633 | 39.0 | <0.0001 | 3.2 | 0.0061 |
|  | Treatment | 2 | 2.1 | 0.2033 | 25.7 | 0.0014 | 21.4 | 0.0019 | 50.0 | 0.0002 |
|  | DAF × Treatment | 16 | 1.6 | 0.1628 | 4.17 | 0.0026 | 5.4 | <0.0001 | 6.9 | <0.0001 |

†Unamended, and FeCl3 amended at 2.5 and 5 Mg ha-1 rates.

**Table S2.** **Mean porewater dissolved reactive P (DRP) concentration and back-transformed mean floodwater DRP concentrations in unamended and FeCl3 amended (at 2.5 and 5 Mg ha-1 rates) monoliths of Soil 1, 2, 3 and 4.**

|  |  |  |  |
| --- | --- | --- | --- |
| Treatment(FeCl3 rate) | DAF | Porewater DRP concentration (mg L-1)a | Floodwater DRP concentration (mg L-1)a |
| Soil 1 | Soil 2 | Soil 3 | Soil 4 | Soil 1 | Soil 2 | Soil 3 | Soil 4 |
| 0 Mg ha-1 | 0 | 0.36 DE | 0.27 CDE | 12.51  | 0.48 GHIJ | 0.07 CD | 0.09  | 3.20 BC | 0.28 BC |
|  | 7 | 0.57 D | 0.46 AB | 12.14  | 0.65 FGH | 0.13 BC | 0.15  | 7.26 ABC | 0.44 BC |
|  | 14 | 0.56 D | 0.47 AB | 11.86  | 0.86 EFG | 0.11 BC | 0.14  | 7.36 AB | 0.60 BC |
|  | 21 | 0.60 CD | 0.46 AB | 13.04  | 1.16 DE | 0.13 BC | 0.13  | 12.3 AB | 0.81 AB |
|  | 28 | 0.72 C | 0.48 A | 16.91  | 1.50 CD | 0.21 BC | 0.18  | 12.88 AB | 1.19 AB |
|  | 35 | 0.76 BC | 0.43 ABC | 16.14  | 1.88 BC | 0.51 A | 0.11  | 13.96 AB | 1.58 AB |
|  | 42 | 0.82 ABC | 0.39 BCD | 17.05  | 2.29 B | 0.31 ABC | 0.06  | 18.12 AB | 2.00 AB |
|  | 49 | 0.93 AB | 0.33 CDE | 15.25  | 3.00 A | 0.34 AB | 0.06  | 35.54 AB | 0.80 ABC |
|  | 56 | 1.08 A | 0.33 CDE | 19.86  | 3.23 A | 0.39 AB | 0.07  | 23.05 AB | 3.01 A |
| 2.5 Mg ha-1 | 0 | 0.01 G | 0.01 G | 1.58  | 0.08 L | 0.02 D | 0.05  | 0.39 CDEF | 0.03 CD |
|  | 7 | 0.09 FG | 0.11 DEFG | 9.58  | 0.21 JKL | 0.05 CD | 0.04  | 0.59 BCDEF | 0.05 CD |
|  | 14 | 0.10 FG | 0.09 EFG | 6.99  | 0.30 JK | 0.05 CD | 0.05  | 0.46 BCDEF | 0.04 CD |
|  | 21 | 0.17 EFG | 0.11 EFG | 10.43  | 0.48 GHIJ | 0.07 CD | 0.04  | 0.57 BCDEF | 0.03 CD |
|  | 28 | 0.15 EFG | 0.15 DEF | 12.19  | 0.64 FGHI | 0.09 BCD | 0.07  | 0.71 BCDE | 0.05 CD |
|  | 35 | 0.14 EFG | 0.13 DEF | 9.31  | 0.90 EFG | 0.01 D | 0.05  | 0.84 BCD | 0.08 BCD |
|  | 42 | 0.17 EFG | 0.15 DEF | 9.17  | 1.15 DEF | 0.05 CD | 0.04  | 0.81 BCDE | 0.02 D |
|  | 49 | 0.15 EFG | 0.17 DEF | 12.59  | 1.38 CDE | 0.01 D | 0.01  | 1.19 BC | 0.03 CD |
|  | 56 | 0.17 EFG | 0.18 CDEF | 10.59  | 1.67 BCD | 0.03 CD | 0.05  | 0.61 BCDE | 0.02 D |
| 5 Mg ha-1 | 0 | 0.07 FG | 0.05 FG | 1.15  | 0.11 KL | 0.03 CD | 0.04  | 0.48 BCDEF | 0.08 BCD |
|  | 7 | 0.06 FG | 0.08 EFG | 0.39  | 0.12 KL | 0.10 BCD | 0.05  | 0.02 F | 0.05 CD |
|  | 14 | 0.09 FG | 0.09 EFG | 2.51  | 0.19 KL | 0.03 CD | 0.05  | 0.06 F | 0.02 D |
|  | 21 | 0.30 DEF | 0.09 EFG | 1.32  | 0.27 JKL | 0.03 CD | 0.01  | 0.03 F | 0.04 CD |
|  | 28 | 0.09 FG | 0.12 DEFG | 1.56  | 0.35 IJ | 0.09 BCD | 0.07  | 0.10 DEF | 0.08 BCD |
|  | 35 | 0.08 FG | 0.09 EFG | 2.52  | 0.47 HIJ | 0.04 CD | 0.04  | 0.03 F | 0.01 D |
|  | 42 | 0.10 EFG | 0.12 DEFG | 1.52  | 0.63 FGHIJ | 0.02 D | 0.04  | 0.06 EF | 0.02 D |
|  | 49 | 0.05 FG | 0.08 EFG | 1.96  | 0.86 EFG | 0.01 D | 0.01  | 0.41 CDEF | 0.01 D |
|  | 56 | 0.11 EFG | 0.10 EFG | 2.74  | 1.11 DEFG | 0.02 D | 0.05  | 0.06 F | 0.03 CD |

a Means with the same uppercase letter within a column are not significantly different (*p* >0.05). The DAF × treatment interaction was not significant for porewater DRP concentrations in Soil 3 and floodwater DRP concentrations in Soil 2.

**Table S3. Values of pe + pH, and porewater and floodwater concentrations of Ca, Mg, Fe and Mn in unamended and FeCl3 amended (at 2.5 and 5 Mg ha-1 rates) monoliths of Soil 1**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Treatment(FeCl3 rate) | DAF | pe + pH | Porewater concentrations (mg L-1) | Floodwater concentrations (mg L-1) |
| Ca | Mg | Fe | Mn | Ca | Mg | Fe | Mn |
| 0 Mg ha-1 | 0 | 15.0 | 24.0 | 16.6 | 0.02 | 0.15 | 3.5 | 3.0 | 0.02 | 0.08 |
|  | 7 | 13.3 | 42.0 | 21.3 | 1.38 | 0.07 | 11.4 | 5.2 | 0.02 | 0.01 |
|  | 14 | 12.1 | 40.9 | 21.8 | 0.02 | 0.42 | 20.8 | 6.1 | 0.02 | 0.01 |
|  | 21 | 10.7 | 70.5 | 25.9 | 0.23 | 0.38 | 41.0 | 14.1 | 0.02 | 0.01 |
|  | 28 | 10.3 | 44.1 | 21.6 | 0.02 | 0.36 | 55.2 | 7.4 | 0.16 | 0.25 |
|  | 35 | 10.6 | 45.4 | 21.6 | 0.02 | 0.43 | 10.1 | 7.3 | 0.45 | 0.32 |
|  | 42 | 10.5 | 3.0 | 21.9 | 0.10 | 0.47 | 1.3 | 8.5 | 0.31 | 0.17 |
|  | 49 | 9.8 | 2.5 | 21.7 | 0.66 | 0.59 | 1.0 | 9.0 | 0.22 | 0.14 |
|  | 56 | 9.2 | 34.1 | 20.4 | 0.33 | 0.64 | 9.3 | 8.4 | 0.22 | 0.21 |
| 2.5 Mg ha-1 | 0 | 11.7 | 68.8 | 260.0 | 15.01 | 12.37 | 183.3 | 62.7 | 6.45 | 3.50 |
|  | 7 | 12.6 | 652.7 | 282.0 | 0.51 | 5.36 | 169.3 | 55.8 | 2.12 | 4.43 |
|  | 14 | 11.9 | 445.0 | 184.0 | 0.36 | 4.50 | 157.6 | 54.6 | 1.41 | 4.06 |
|  | 21 | 11.3 | 492.3 | 164.3 | 0.29 | 6.72 | 191.0 | 53.8 | 1.20 | 5.28 |
|  | 28 | 11.3 | 328.7 | 143.1 | 0.40 | 4.60 | 258.0 | 55.0 | 1.10 | 4.54 |
|  | 35 | 11.3 | 282.3 | 127.0 | 0.48 | 4.67 | 117.7 | 55.1 | 1.18 | 4.49 |
|  | 42 | 11.1 | 247.7 | 116.3 | 0.53 | 4.77 | 197.7 | 74.0 | 0.61 | 5.09 |
|  | 49 | 10.4 | 241.3 | 114.3 | 0.89 | 4.85 | 150.3 | 52.5 | 1.05 | 4.88 |
|  | 56 | 10.7 | 216.7 | 95.2 | 0.95 | 4.66 | 135.9 | 40.8 | 1.03 | 4.85 |
| 5 Mg ha-1 | 0 | 9.7 | 617.7 | 586.0 | 113.43 | 77.60 | 207.0 | 69.7 | 39.97 | 6.60 |
|  | 7 | 9.9 | 922.0 | 359.3 | 6.69 | 21.81 | 247.7 | 90.4 | 32.61 | 9.17 |
|  | 14 | 10.3 | 1103.0 | 344.7 | 3.17 | 25.97 | 251.3 | 81.5 | 18.71 | 9.13 |
|  | 21 | 9.9 | 980.0 | 285.0 | 2.67 | 25.43 | 492.0 | 173.4 | 18.93 | 17.97 |
|  | 28 | 10.1 | 694.7 | 261.0 | 2.69 | 17.87 | 407.7 | 89.7 | 15.11 | 10.35 |
|  | 35 | 10.0 | 585.0 | 241.0 | 2.70 | 17.10 | 259.3 | 91.7 | 13.81 | 10.55 |
|  | 42 | 9.9 | 525.3 | 190.3 | 3.28 | 17.20 | 284.3 | 109.0 | 13.82 | 11.93 |
|  | 49 | 9.2 | 489.7 | 218.3 | 3.57 | 16.97 | 267.7 | 91.9 | 11.22 | 11.73 |
|  | 56 | 9.6 | 468.3 | 194.0 | 3.74 | 16.60 | 241.0 | 71.7 | 11.14 | 11.40 |

**Table S4. Values of pe + pH, and porewater and floodwater concentrations of dissolved reactive P (DRP), Ca, Mg, Fe and Mn in unamended and FeCl3 amended (at 2.5 and 5 Mg ha-1 rates) monoliths of Soil 2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Treatment(FeCl3 rate) | DAF | pe + pH | Porewater concentrations (mg L-1) | Floodwater concentrations (mg L-1) |
| Ca | Mg | Fe | Mn | Ca | Mg | Fe | Mn |
| 0 Mg ha-1 | 0 | 14.6 | 3.8 | 13.1 | 0.02 | 0.08 | 3.6 | 2.4 | 0.02 | 0.01 |
|  | 7 | 14.2 | 8.0 | 11.8 | 0.02 | 0.01 | 5.3 | 3.3 | 0.02 | 0.08 |
|  | 14 | 13.1 | 15.9 | 9.3 | 0.02 | 0.01 | 7.9 | 3.3 | 0.02 | 0.01 |
|  | 21 | 11.5 | 23.3 | 10.0 | 0.02 | 0.11 | 8.9 | 3.9 | 0.02 | 0.01 |
|  | 28 | 11.2 | 9.4 | 9.8 | 0.02 | 0.15 | 16.7 | 4.1 | 0.02 | 0.01 |
|  | 35 | 10.7 | 18.7 | 11.1 | 0.02 | 0.13 | 0.8 | 4.8 | 0.02 | 0.01 |
|  | 42 | 10.0 | 1.5 | 12.0 | 0.02 | 0.19 | 0.5 | 4.1 | 0.06 | 0.01 |
|  | 49 | 9.7 | 1.2 | 11.9 | 0.05 | 0.27 | 1.3 | 4.3 | 0.07 | 0.01 |
|  | 56 | 10.2 | 14.8 | 11.1 | 0.06 | 0.46 | 3.6 | 4.4 | 0.05 | 0.01 |
| 2.5 Mg ha-1 | 0 | 13.2 | 86.5 | 396.0 | 1.51 | 6.24 | 88.7 | 37.8 | 4.42 | 2.22 |
|  | 7 | 12.6 | 472.7 | 208.4 | 0.02 | 0.94 | 72.7 | 20.9 | 0.84 | 1.69 |
|  | 14 | 12.1 | 392.0 | 156.1 | 0.02 | 0.86 | 83.7 | 23.8 | 0.51 | 2.06 |
|  | 21 | 11.4 | 353.0 | 115.4 | 0.02 | 0.95 | 93.1 | 24.2 | 0.46 | 2.62 |
|  | 28 | 10.9 | 274.7 | 121.0 | 0.14 | 1.08 | 138.8 | 28.4 | 0.40 | 2.25 |
|  | 35 | 11.0 | 204.3 | 95.9 | 0.23 | 1.23 | 52.9 | 30.5 | 0.51 | 2.41 |
|  | 42 | 10.9 | 205.3 | 97.5 | 0.18 | 1.45 | 120.8 | 25.6 | 0.46 | 2.54 |
|  | 49 | 11.1 | 206.0 | 92.7 | 0.47 | 1.50 | 102.3 | 30.3 | 0.36 | 2.94 |
|  | 56 | 11.5 | 164.5 | 68.9 | 0.50 | 1.69 | 63.5 | 17.1 | 0.38 | 2.37 |
| 5 Mg ha-1 | 0 | 11.4 | 628.3 | 475.0 | 22.43 | 16.27 | 160.7 | 56.9 | 27.57 | 4.98 |
|  | 7 | 11.8 | 1379.3 | 541.7 | 0.58 | 13.44 | 179.3 | 58.6 | 29.43 | 5.91 |
|  | 14 | 10.9 | 1207.0 | 441.7 | 0.33 | 12.53 | 194.3 | 65.9 | 24.50 | 6.96 |
|  | 21 | 10.9 | 1309.3 | 397.0 | 0.34 | 20.70 | 270.0 | 76.5 | 36.17 | 11.1 |
|  | 28 | 11.0 | 814.7 | 334.7 | 0.37 | 13.69 | 335.3 | 73.0 | 20.03 | 7.91 |
|  | 35 | 10.7 | 723.7 | 293.3 | 0.50 | 14.28 | 213.3 | 68.4 | 18.63 | 8.48 |
|  | 42 | 10.7 | 694.3 | 296.3 | 0.78 | 14.87 | 231.7 | 82.5 | 18.97 | 9.45 |
|  | 49 | 10.2 | 669.7 | 298.0 | 1.02 | 15.67 | 220.0 | 68.4 | 16.61 | 9.59 |
|  | 56 | 8.5 | 519.0 | 225.7 | 1.15 | 16.03 | 213.7 | 59.5 | 15.13 | 9.80 |

**Table S5. Values of pe + pH, and porewater and floodwater concentrations of dissolved reactive P (DRP), Ca, Mg, Fe and Mn in unamended and FeCl3 amended (at 2.5 and 5 Mg ha-1 rates) monoliths of Soil 3**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Treatment(FeCl3 rate) | DAF | pe + pH | Porewater concentrations (mg L-1) | Floodwater concentrations (mg L-1) |
| Ca | Mg | Fe | Mn | Ca | Mg | Fe | Mn |
| 0 Mg ha-1 | 0 | 14.5 | 26.0 | 156.7 | 0.02 | 0.01 | 10.3 | 16.8 | 0.02 | 0.01 |
|  | 7 | 13.5 | 218.7 | 193.0 | 0.02 | 0.01 | 13.8 | 15.7 | 0.02 | 0.01 |
|  | 14 | 12.7 | 188.7 | 167.9 | 0.02 | 0.09 | 17.2 | 42.8 | 0.02 | 0.07 |
|  | 21 | 12.7 | 211.7 | 129.0 | 0.02 | 0.15 | 19.9 | 31.3 | 0.02 | 0.01 |
|  | 28 | 12.5 | 152.3 | 132.6 | 0.02 | 0.15 | 40.9 | 28.6 | 0.02 | 0.01 |
|  | 35 | 11.8 | 151.7 | 121.6 | 0.02 | 0.21 | 20.7 | 31.3 | 0.02 | 0.01 |
|  | 42 | 11.3 | 152.0 | 132.3 | 0.02 | 0.22 | 2.2 | 35.2 | 0.04 | 0.01 |
|  | 49 | 11.7 | 139.7 | 123.7 | 0.11 | 0.27 | 1.6 | 46.0 | 0.02 | 0.02 |
|  | 56 | 11.4 | 124.1 | 105.4 | 0.09 | 0.31 | 19.3 | 35.6 | 0.05 | 0.02 |
| 2.5 Mg ha-1 | 0 | 12.2 | 51.3 | 356.0 | 1.91 | 1.40 | 103.8 | 71.2 | 2.04 | 0.87 |
|  | 7 | 7.6 | 639.3 | 545.7 | 0.02 | 0.63 | 128.0 | 72.5 | 0.46 | 1.02 |
|  | 14 | 7.7 | 515.7 | 328.3 | 0.02 | 0.46 | 132.3 | 79.6 | 0.28 | 1.04 |
|  | 21 | 8.7 | 494.7 | 298.0 | 0.02 | 0.42 | 161.3 | 80.1 | 0.02 | 1.08 |
|  | 28 | 8.7 | 396.0 | 409.0 | 0.02 | 0.38 | 265.3 | 107.7 | 0.02 | 1.00 |
|  | 35 | 8.6 | 379.0 | 368.7 | 0.19 | 0.42 | 127.5 | 88.3 | 0.02 | 1.04 |
|  | 42 | 8.6 | 351.0 | 357.0 | 0.14 | 0.49 | 143.0 | 106.0 | 0.03 | 0.84 |
|  | 49 | 9.2 | 346.0 | 364.0 | 0.28 | 0.59 | 160.3 | 99.2 | 0.04 | 0.83 |
|  | 56 | 7.6 | 301.0 | 293.0 | 0.30 | 0.65 | 135.1 | 78.3 | 0.02 | 0.78 |
| 5 Mg ha-1 | 0 | 10.3 | 79.7 | 742.3 | 34.16 | 6.10 | 146.7 | 82.9 | 22.57 | 1.81 |
|  | 7 | 11.6 | 1471.0 | 1181.0 | 1.57 | 4.30 | 183.3 | 88.9 | 6.40 | 2.17 |
|  | 14 | 11.9 | 1197.3 | 874.3 | 0.72 | 3.45 | 244.7 | 117.9 | 2.84 | 2.56 |
|  | 21 | 11.4 | 1004.3 | 851.7 | 0.24 | 1.94 | 329.0 | 145.0 | 1.91 | 5.00 |
|  | 28 | 11.5 | 754.7 | 812.0 | 0.19 | 1.75 | 412.0 | 139.0 | 1.35 | 2.54 |
|  | 35 | 11.5 | 603.7 | 802.3 | 0.23 | 1.46 | 207.7 | 151.7 | 1.06 | 2.42 |
|  | 42 | 10.5 | 701.7 | 667.7 | 0.18 | 1.46 | 232.0 | 191.3 | 0.73 | 2.74 |
|  | 49 | 10.5 | 773.3 | 660.0 | 0.42 | 1.61 | 262.7 | 176.3 | 0.76 | 2.66 |
|  | 56 | 10.0 | 580.3 | 598.0 | 0.39 | 1.44 | 240.7 | 150.3 | 0.92 | 2.72 |

**Table S6. Values of pe + pH, and porewater and floodwater concentrations of dissolved reactive P (DRP), Ca, Mg, Fe and Mn in unamended and FeCl3 amended (at 2.5 and 5 Mg ha-1 rates) monoliths of Soil 4**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Treatment(FeCl3 rate) | DAF | pe + pH | Porewater concentrations (mg L-1) | Floodwater concentrations (mg L-1) |
| Ca | Mg | Fe | Mn | Ca | Mg | Fe | Mn |
| 0 Mg ha-1 | 0 | 13.5 | 55.3 | 40.6 | 0.02 | 0.01 | 12.6 | 4.6 | 0.02 | 0.01 |
|  | 7 | 12.2 | 107.7 | 50.8 | 0.02 | 0.01 | 26.0 | 5.2 | 0.02 | 0.24 |
|  | 14 | 11.2 | 104.9 | 49.5 | 0.02 | 0.01 | 22.2 | 7.6 | 0.02 | 0.11 |
|  | 21 | 11.0 | 143.7 | 54.0 | 0.19 | 0.46 | 121.0 | 12.7 | 0.02 | 0.32 |
|  | 28 | 10.8 | 108.7 | 53.5 | 0.26 | 0.53 | 64.0 | 10.7 | 0.02 | 0.10 |
|  | 35 | 10.4 | 126.0 | 55.1 | 0.37 | 0.63 | 36.7 | 11.9 | 0.13 | 0.01 |
|  | 42 | 9.7 | 146.3 | 56.2 | 0.52 | 0.71 | 2.4 | 13.0 | 0.20 | 0.07 |
|  | 49 | 9.5 | 130.3 | 58.1 | 0.75 | 0.80 | 6.4 | 16.1 | 0.38 | 0.21 |
|  | 56 | 8.4 | 127.7 | 46.5 | 0.77 | 0.84 | 25.6 | 14.2 | 0.30 | 0.12 |
| 2.5 Mg ha-1 | 0 | 11.7 | 64.4 | 255.0 | 7.98 | 1.98 | 46.9 | 34.9 | 8.53 | 0.89 |
|  | 7 | 11.4 | 763.3 | 312.3 | 0.87 | 2.26 | 92.5 | 26.4 | 8.76 | 1.08 |
|  | 14 | 10.7 | 598.7 | 260.3 | 1.00 | 2.37 | 116.8 | 43.5 | 3.93 | 1.27 |
|  | 21 | 10.4 | 718.7 | 236.0 | 1.53 | 2.71 | 172.3 | 47.6 | 0.62 | 1.44 |
|  | 28 | 10.2 | 452.3 | 198.0 | 1.91 | 2.17 | 275.3 | 54.9 | 2.39 | 1.47 |
|  | 35 | 10.1 | 380.0 | 179.3 | 2.31 | 2.14 | 164.7 | 52.9 | 2.71 | 1.59 |
|  | 42 | 10.2 | 335.7 | 174.3 | 2.88 | 2.23 | 167.7 | 58.1 | 1.84 | 1.60 |
|  | 49 | 9.9 | 326.7 | 164.3 | 3.57 | 2.21 | 172.3 | 58.1 | 1.84 | 1.80 |
|  | 56 | 9.2 | 307.0 | 136.3 | 3.99 | 2.26 | 156.7 | 44.6 | 1.20 | 2.04 |
| 5 Mg ha-1 | 0 | 12.5 | 1305.3 | 982.0 | 87.70 | 12.65 | 79.7 | 61.7 | 21.17 | 1.27 |
|  | 7 | 12.1 | 1287.3 | 555.7 | 1.38 | 5.00 | 153.7 | 50.1 | 11.00 | 1.70 |
|  | 14 | 11.3 | 1075.3 | 453.3 | 1.52 | 6.02 | 185.7 | 63.6 | 7.69 | 1.89 |
|  | 21 | 11.0 | 1280.0 | 425.0 | 2.16 | 9.11 | 253.0 | 73.0 | 9.40 | 2.54 |
|  | 28 | 11.1 | 777.0 | 361.7 | 2.64 | 4.74 | 368.3 | 80.5 | 8.73 | 2.47 |
|  | 35 | 11.2 | 75.1 | 336.7 | 3.49 | 4.52 | 219.7 | 89.4 | 10.09 | 2.58 |
|  | 42 | 10.9 | 693.0 | 310.3 | 4.63 | 4.90 | 211.0 | 99.3 | 12.51 | 3.25 |
|  | 49 | 10.8 | 623.3 | 289.7 | 6.65 | 4.92 | 500.7 | 123.6 | 13.35 | 2.90 |
|  | 56 | 10.5 | 730.0 | 250.0 | 7.46 | 4.88 | 210.3 | 69.8 | 13.87 | 2.88 |