



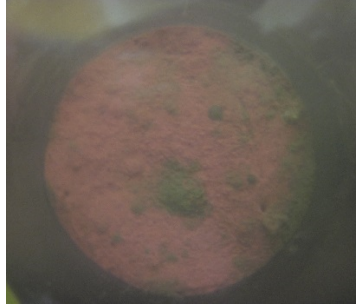





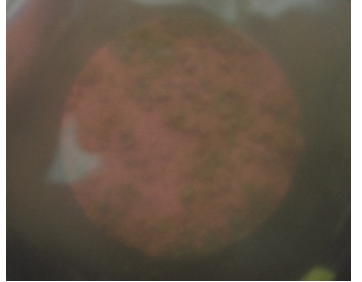





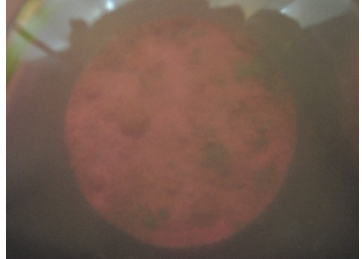
ANNEX 1: Vertical oxygen concentration profiles. Depths are shown in μm , oxygen concentrations in $\mu\text{mol L}^{-1}$. All values are means \pm standard error. T0 till T5 represent the four different treatments, each with an initial deposited sediment layer of 0 (T0), 1 (T1), 2 (T2) or 5 (T5) cm, that compacted to 1.09 ± 0.18 (T1), 1.52 ± 0.10 (T2) and 3.75 ± 0.11 cm (T5).

| T0 | | T1 | | T2 | | T5 | |
|-------|--------------------|-------|--------------------|-------|--------------------|-------|--------------------|
| Depth | [O ₂] | Depth | [O ₂] | Depth | [O ₂] | Depth | [O ₂] |
| -1000 | 267.59 \pm 25.01 | -1000 | 260.65 \pm 21.94 | -1000 | 269.10 \pm 23.18 | -1000 | 276.92 \pm 23.56 |
| -750 | 267.49 \pm 25.02 | -750 | 260.55 \pm 21.92 | -750 | 268.68 \pm 23.23 | -750 | 276.78 \pm 23.49 |
| -500 | 267.19 \pm 24.95 | -500 | 260.56 \pm 21.98 | -500 | 268.21 \pm 23.55 | -500 | 276.26 \pm 23.37 |
| -250 | 266.78 \pm 24.82 | -250 | 260.24 \pm 22.03 | -250 | 266.67 \pm 23.91 | -250 | 275.37 \pm 23.17 |
| 0 | 264.96 \pm 24.65 | 0 | 258.13 \pm 21.47 | 0 | 262.18 \pm 22.88 | 0 | 273.68 \pm 22.79 |
| 250 | 238.56 \pm 25.35 | 250 | 246.07 \pm 21.72 | 250 | 249.49 \pm 22.78 | 250 | 259.45 \pm 24.93 |
| 500 | 198.44 \pm 26.64 | 500 | 228.91 \pm 23.35 | 500 | 233.66 \pm 20.64 | 500 | 234.26 \pm 30.29 |
| 750 | 160.76 \pm 23.76 | 750 | 196.85 \pm 19.06 | 750 | 203.30 \pm 16.06 | 750 | 201.92 \pm 34.56 |
| 1000 | 129.17 \pm 20.30 | 1000 | 159.12 \pm 17.56 | 1000 | 177.36 \pm 14.29 | 1000 | 173.89 \pm 38.78 |
| 1250 | 95.36 \pm 15.55 | 1250 | 130.09 \pm 18.75 | 1250 | 148.80 \pm 16.57 | 1250 | 138.42 \pm 31.67 |
| 1500 | 65.00 \pm 13.72 | 1500 | 107.64 \pm 20.46 | 1500 | 126.25 \pm 15.47 | 1500 | 102.02 \pm 24.43 |
| 1750 | 42.99 \pm 11.08 | 1750 | 91.66 \pm 21.93 | 1750 | 107.81 \pm 15.90 | 1750 | 80.68 \pm 21.82 |
| 2000 | 28.31 \pm 8.65 | 2000 | 79.89 \pm 22.24 | 2000 | 93.51 \pm 16.43 | 2000 | 64.74 \pm 20.25 |
| 2250 | 18.41 \pm 6.30 | 2250 | 71.11 \pm 21.92 | 2250 | 82.51 \pm 16.70 | 2250 | 53.01 \pm 18.43 |
| 2500 | 11.17 \pm 4.31 | 2500 | 63.89 \pm 21.51 | 2500 | 73.88 \pm 16.02 | 2500 | 45.20 \pm 16.37 |
| 2750 | 6.07 \pm 2.69 | 2750 | 58.76 \pm 20.81 | 2750 | 66.80 \pm 15.13 | 2750 | 40.03 \pm 14.56 |
| 3000 | 2.45 \pm 1.52 | 3000 | 55.00 \pm 20.63 | 3000 | 60.45 \pm 13.77 | 3000 | 34.16 \pm 12.99 |
| 3250 | 1.32 \pm 0.79 | 3250 | 51.47 \pm 20.11 | 3250 | 55.34 \pm 12.25 | 3250 | 29.81 \pm 11.56 |
| 3500 | 0.40 \pm 0.25 | 3500 | 47.56 \pm 19.60 | 3500 | 50.89 \pm 11.24 | 3500 | 28.13 \pm 10.40 |
| 3750 | 0.00 \pm 0.00 | 3750 | 42.90 \pm 19.07 | 3750 | 46.39 \pm 10.30 | 3750 | 26.48 \pm 9.79 |
| 4000 | 0.00 \pm 0.00 | 4000 | 39.05 \pm 19.08 | 4000 | 42.30 \pm 9.16 | 4000 | 25.35 \pm 9.65 |
| | | 4250 | 36.54 \pm 18.53 | 4250 | 38.54 \pm 8.15 | 4250 | 25.58 \pm 9.97 |
| | | 4500 | 33.83 \pm 17.78 | 4500 | 34.80 \pm 7.52 | 4500 | 26.33 \pm 10.71 |
| | | 4750 | 31.47 \pm 17.00 | 4750 | 31.35 \pm 6.82 | 4750 | 27.18 \pm 12.00 |
| | | 5000 | 28.82 \pm 15.88 | 5000 | 28.93 \pm 6.36 | 5000 | 28.28 \pm 13.27 |
| | | 5250 | 26.12 \pm 14.44 | 5250 | 26.61 \pm 5.72 | 5250 | 29.81 \pm 14.79 |
| | | 5500 | 23.34 \pm 12.92 | 5500 | 24.10 \pm 5.22 | 5500 | 31.22 \pm 16.62 |
| | | 5750 | 20.00 \pm 10.91 | 5750 | 21.67 \pm 5.06 | 5750 | 34.40 \pm 18.85 |
| | | 6000 | 16.95 \pm 9.29 | 6000 | 19.30 \pm 5.00 | 6000 | 36.62 \pm 19.90 |
| | | 6250 | 17.65 \pm 8.07 | 6250 | 17.76 \pm 4.88 | 6250 | 38.16 \pm 20.66 |
| | | 6500 | 14.21 \pm 6.49 | 6500 | 15.63 \pm 4.40 | 6500 | 40.22 \pm 21.33 |
| | | 6750 | 11.24 \pm 5.23 | 6750 | 13.68 \pm 3.88 | 6750 | 42.55 \pm 22.46 |
| | | 7000 | 8.08 \pm 3.91 | 7000 | 12.03 \pm 3.68 | 7000 | 45.16 \pm 23.84 |
| | | 7250 | 4.98 \pm 2.83 | 7250 | 10.28 \pm 3.24 | 7250 | 48.35 \pm 25.36 |
| | | 7500 | 2.91 \pm 2.13 | 7500 | 8.95 \pm 3.00 | 7500 | 51.79 \pm 26.79 |
| | | 7750 | 1.84 \pm 1.82 | 7750 | 8.00 \pm 2.97 | 7750 | 54.69 \pm 28.15 |
| | | 8000 | 1.30 \pm 1.30 | 8000 | 7.10 \pm 2.73 | 8000 | 55.57 \pm 28.48 |
| | | 8250 | 1.00 \pm 1.00 | 8250 | 6.07 \pm 2.41 | 8250 | 56.30 \pm 28.78 |
| | | 8500 | 0.97 \pm 0.97 | 8500 | 5.35 \pm 2.14 | 8500 | 57.00 \pm 28.91 |
| | | 8750 | 0.10 \pm 0.10 | 8750 | 4.79 \pm 1.97 | 8750 | 58.51 \pm 29.64 |
| | | 9000 | 0.00 \pm 0.00 | 9000 | 4.31 \pm 1.84 | 9000 | 60.58 \pm 30.33 |
| | | 9250 | 0.00 \pm 0.00 | 9250 | 3.78 \pm 1.80 | 9250 | 61.67 \pm 30.73 |
| | | 9500 | 0.00 \pm 0.00 | 9500 | 3.07 \pm 1.57 | 9500 | 62.61 \pm 30.98 |
| | | | | 9750 | 2.93 \pm 1.59 | 9750 | 63.37 \pm 31.15 |
| | | | | 10000 | 3.08 \pm 1.83 | 10000 | 64.44 \pm 31.46 |
| | | | | 10250 | 2.72 \pm 1.82 | 10250 | 65.09 \pm 31.58 |
| | | | | 10500 | 1.96 \pm 1.24 | 10500 | 65.71 \pm 31.45 |
| | | | | 10750 | 1.91 \pm 1.20 | 10750 | 65.98 \pm 31.31 |
| | | | | 11000 | 1.64 \pm 1.19 | 11000 | 66.26 \pm 31.22 |
| | | | | 11250 | 1.21 \pm 0.86 | 11250 | 66.41 \pm 31.10 |
| | | | | 11500 | 0.25 \pm 0.24 | 11500 | 66.57 \pm 30.98 |
| | | | | 11750 | 0.17 \pm 0.13 | 11750 | 66.81 \pm 30.83 |
| | | | | 12000 | 0.24 \pm 0.19 | 12000 | 67.08 \pm 30.74 |

| | | | |
|-------|-----------------|-------|-------------------|
| 12250 | 0.11 ± 0.11 | 12250 | 67.15 ± 30.57 |
| 12500 | 0.04 ± 0.04 | 12500 | 67.07 ± 30.37 |
| 12750 | 0.00 ± 0.00 | 12750 | 66.96 ± 30.24 |
| 13000 | 0.00 ± 0.00 | 13000 | 66.97 ± 30.07 |
| | | 13250 | 66.92 ± 29.91 |
| | | 13500 | 66.62 ± 29.76 |
| | | 13750 | 66.12 ± 29.56 |
| | | 14000 | 65.41 ± 29.21 |
| | | 14250 | 64.87 ± 29.06 |
| | | 14500 | 64.15 ± 28.71 |
| | | 14750 | 63.06 ± 28.26 |
| | | 15000 | 61.95 ± 27.82 |
| | | 15250 | 60.91 ± 27.39 |
| | | 15500 | 59.95 ± 27.06 |
| | | 15750 | 59.05 ± 26.69 |
| | | 16000 | 58.09 ± 26.26 |
| | | 16250 | 57.29 ± 25.95 |
| | | 16500 | 56.83 ± 25.88 |
| | | 16750 | 56.18 ± 25.71 |
| | | 17000 | 54.88 ± 25.26 |
| | | 17250 | 53.71 ± 24.73 |
| | | 17500 | 52.69 ± 24.29 |
| | | 17750 | 51.63 ± 23.88 |
| | | 18000 | 50.30 ± 23.25 |
| | | 18250 | 49.28 ± 22.87 |
| | | 18500 | 48.41 ± 22.54 |
| | | 18750 | 47.35 ± 22.11 |
| | | 19000 | 46.32 ± 21.70 |
| | | 19250 | 45.58 ± 21.43 |
| | | 19500 | 44.62 ± 21.04 |
| | | 19750 | 43.72 ± 20.66 |
| | | 20000 | 42.80 ± 20.31 |
| | | 20250 | 41.67 ± 19.90 |
| | | 20500 | 40.28 ± 19.54 |
| | | 20750 | 39.05 ± 19.13 |
| | | 21000 | 38.00 ± 18.81 |
| | | 21250 | 37.00 ± 18.42 |
| | | 21500 | 35.85 ± 17.85 |
| | | 21750 | 34.84 ± 17.38 |
| | | 22000 | 33.18 ± 16.75 |
| | | 22250 | 32.20 ± 16.38 |
| | | 22500 | 30.94 ± 15.89 |
| | | 22750 | 29.57 ± 15.35 |
| | | 23000 | 28.84 ± 15.03 |
| | | 23250 | 27.79 ± 14.50 |
| | | 23500 | 27.00 ± 14.26 |
| | | 23750 | 26.14 ± 13.88 |
| | | 24000 | 25.25 ± 13.45 |
| | | 24250 | 24.23 ± 12.96 |
| | | 24500 | 23.17 ± 12.52 |
| | | 24750 | 21.90 ± 12.00 |
| | | 25000 | 20.70 ± 11.48 |
| | | 25250 | 19.60 ± 10.85 |
| | | 25500 | 18.48 ± 10.31 |
| | | 25750 | 17.53 ± 9.88 |
| | | 26000 | 16.65 ± 9.44 |
| | | 26250 | 15.76 ± 8.98 |
| | | 26500 | 15.25 ± 8.71 |
| | | 26750 | 14.58 ± 8.33 |
| | | 27000 | 13.98 ± 8.02 |

| | |
|-------|--------------|
| 27250 | 13.19 ± 7.60 |
| 27500 | 12.43 ± 7.19 |
| 27750 | 11.67 ± 6.75 |
| 28000 | 11.00 ± 6.35 |
| 28250 | 10.15 ± 5.87 |
| 28500 | 9.20 ± 5.34 |
| 28750 | 8.52 ± 4.93 |
| 29000 | 8.02 ± 4.68 |
| 29250 | 7.47 ± 4.38 |
| 29500 | 7.07 ± 4.17 |
| 29750 | 6.74 ± 4.00 |
| 30000 | 6.19 ± 3.68 |
| 30250 | 5.84 ± 3.44 |
| 30500 | 5.56 ± 3.29 |
| 30750 | 5.21 ± 3.10 |
| 31000 | 4.93 ± 2.95 |
| 31250 | 4.29 ± 2.63 |
| 31500 | 3.54 ± 2.20 |
| 31750 | 3.21 ± 1.97 |
| 32000 | 3.12 ± 1.91 |
| 32250 | 2.55 ± 1.60 |
| 32500 | 2.31 ± 1.44 |
| 32750 | 1.97 ± 1.23 |
| 33000 | 1.61 ± 1.00 |
| 33250 | 1.23 ± 0.76 |
| 33500 | 0.89 ± 0.55 |
| 33750 | 0.43 ± 0.29 |
| 34000 | 0.17 ± 0.17 |
| 34250 | 0.07 ± 0.07 |
| 34500 | 0.00 ± 0.00 |

ANNEX 2: Photos from the surface of the control cores, taken the first, second, and seventh day of the experiment. The six rows, labeled 0.1 till 0.6, represent the six replicates of the control treatment.

| | Day 1 | Day 2 | Day 7 |
|-----|---|--|---|
| 0.1 |  |  |  |
| 0.2 |  |  |  |
| 0.3 |  |  |  |
| 0.4 |  |  |  |
| 0.5 |  |  |  |

0.6

