

# **Supplementary material**

## **Catalog of Charts**

**Figure S1. Grain size distribution of paddy soil and red soil**

**Figure S2. Concentrations of TN, TP and COD lost under simulated rainfall**

**Figure S3. Amount of TN, TP and COD lost under simulated rainfall**

**Figure S4. TN, TP, and COD loss concentrations under flooded irrigation**

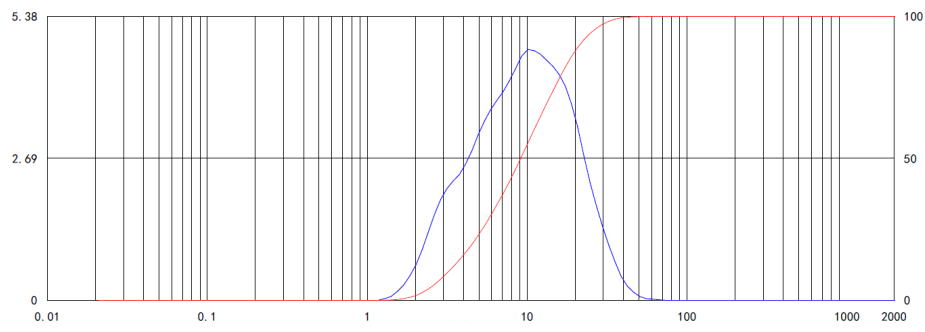
**Figure S5. TN, TP, and COD loss amount under flooded irrigation**

**Figure S6. Concentrations of COD, TN, and TP in the leaching liquid after application of commercial organic fertilizer under simulated rainfall conditions**

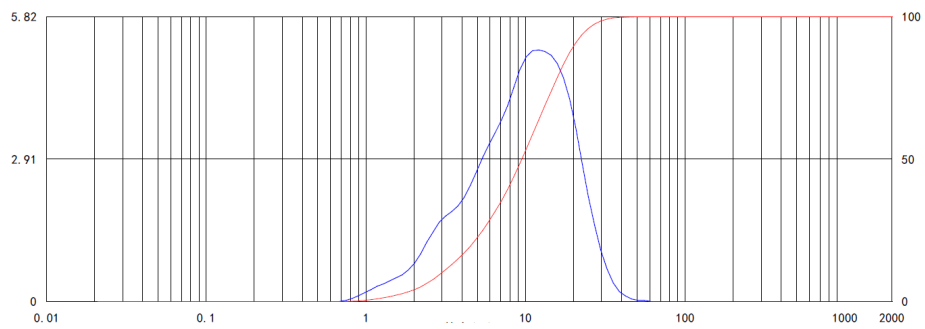
**Figure S7. Amount of COD, TN, and TP in the leaching liquid after application of commercial organic fertilizer under simulated rainfall conditions.**

**Figure S8. Concentrations of COD, TN, and TP after commercial organic fertilizer application under flood conditions**

**Figure S9. Losses of COD, TN, and TP after commercial organic fertilizer application under flood conditions**

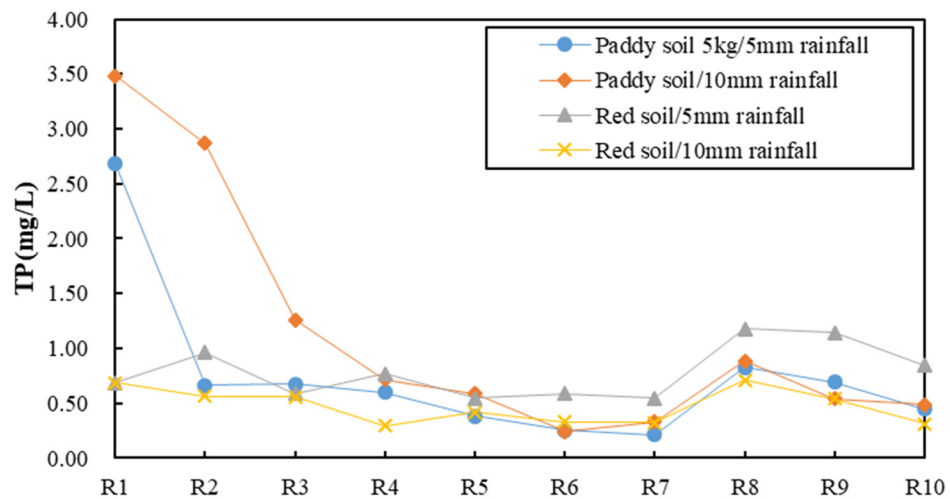
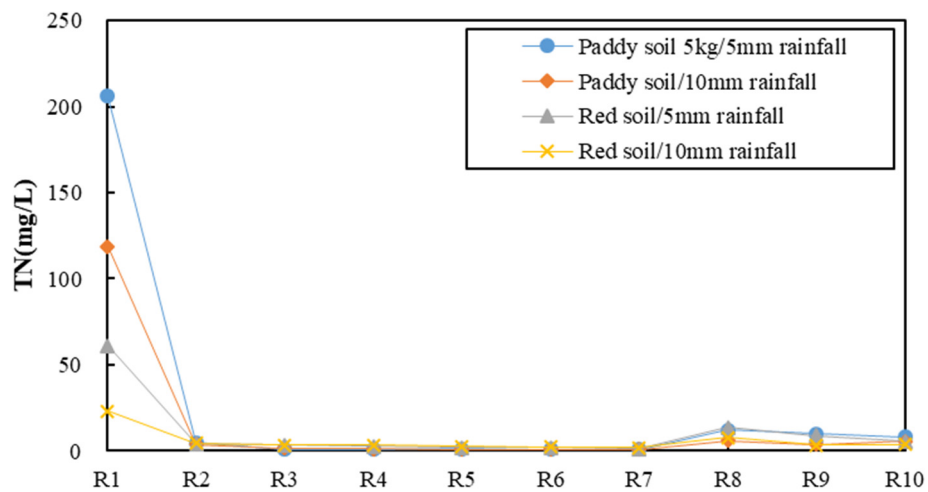


a. Paddy soil (unit:  $\mu\text{m}$ )



b. Red soil (unit:  $\mu\text{m}$ )

**Figure S1. Grain size distribution of paddy soil and red soil**



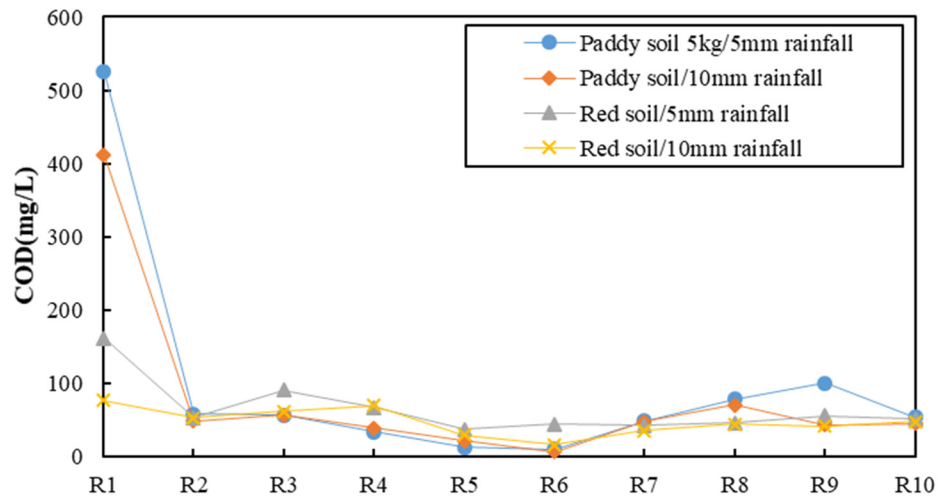
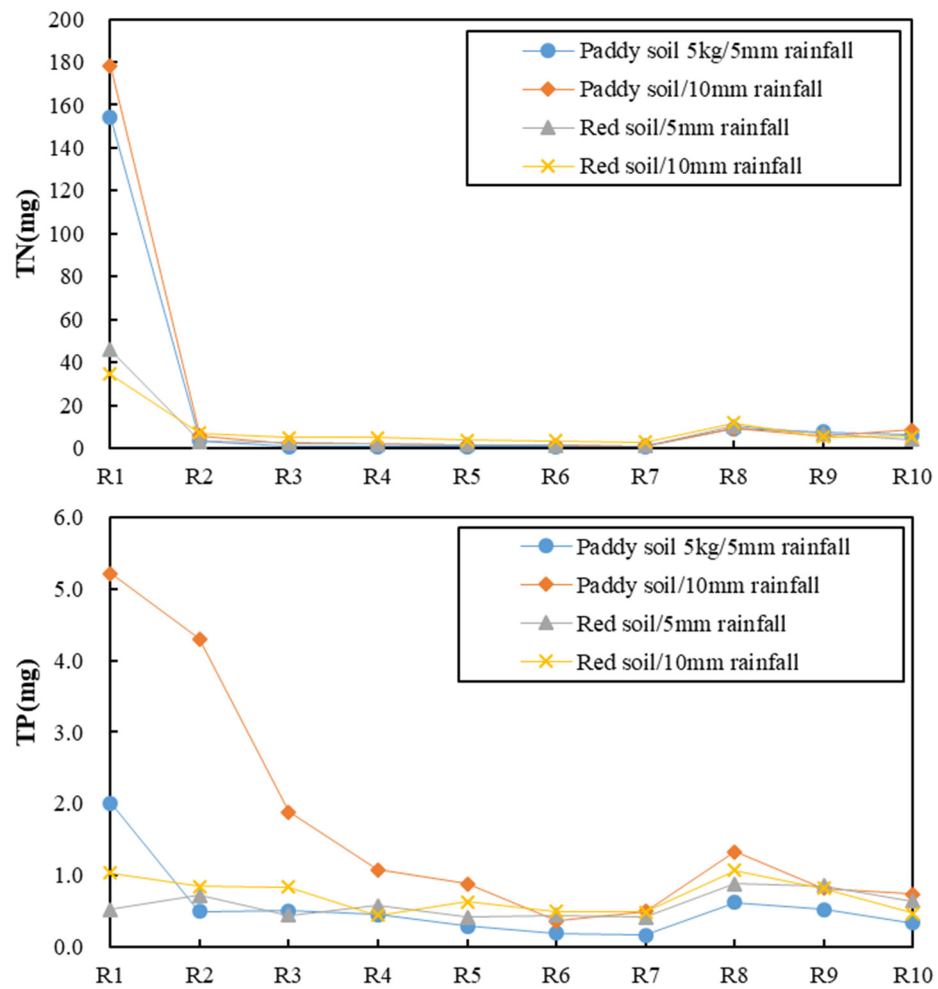


Figure S2. Concentrations of TN, TP and COD lost under simulated rainfall



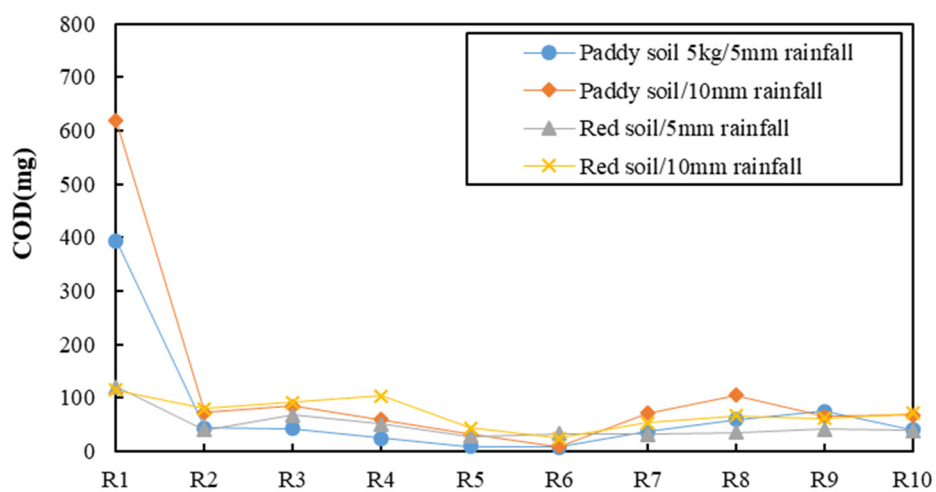
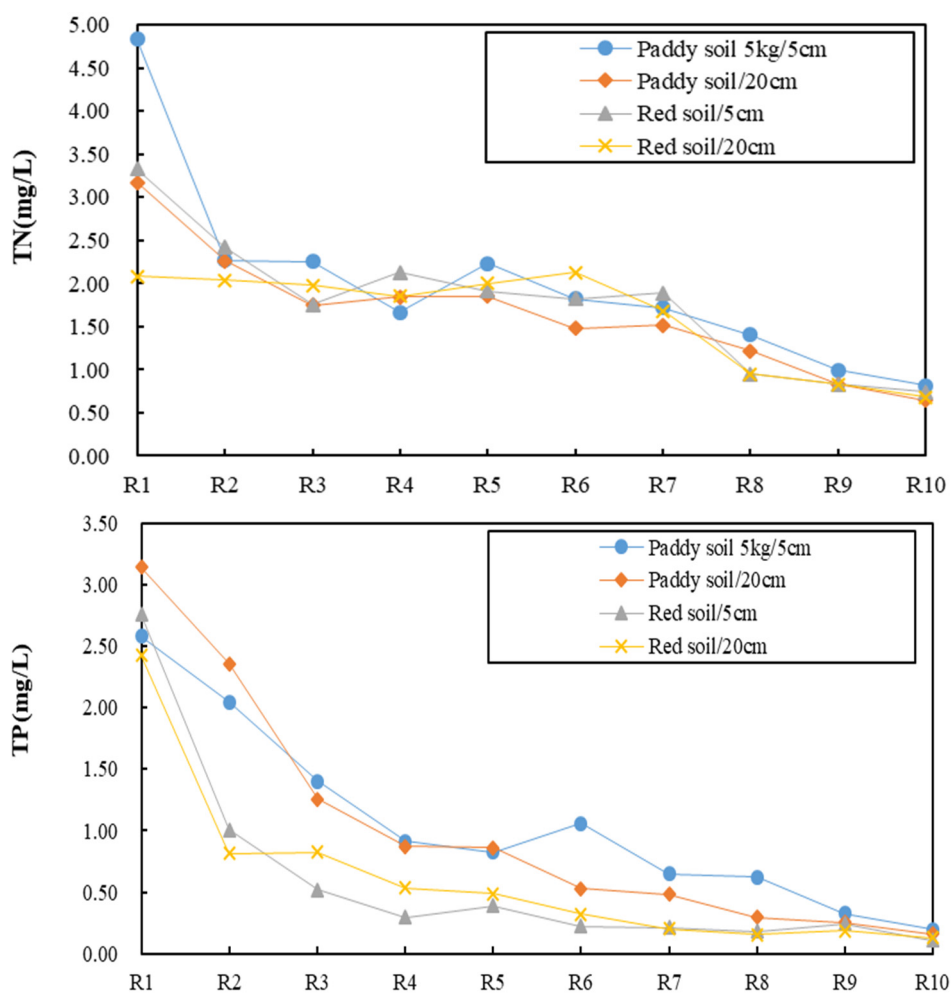


Figure S3. Amount of TN, TP and COD lost under simulated rainfall



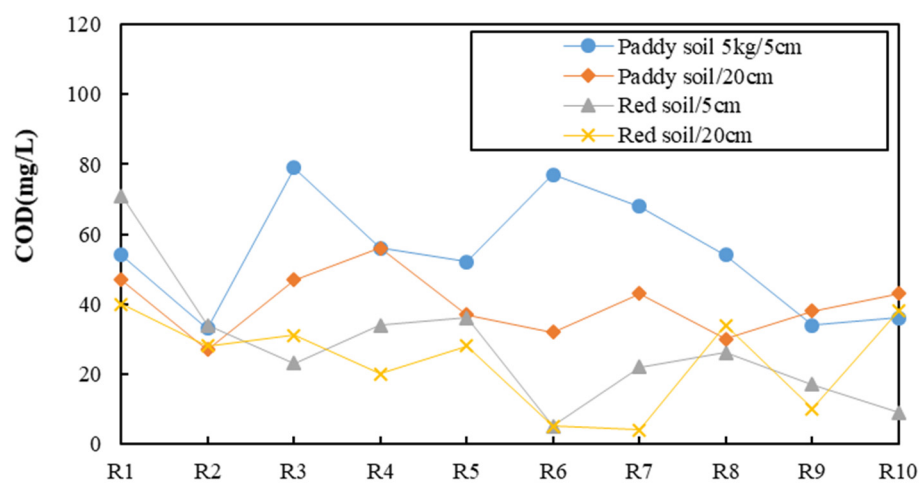
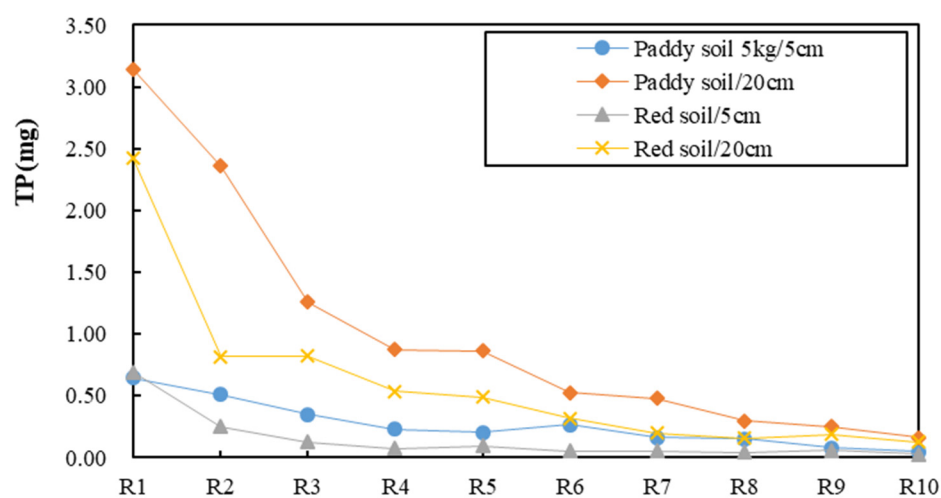
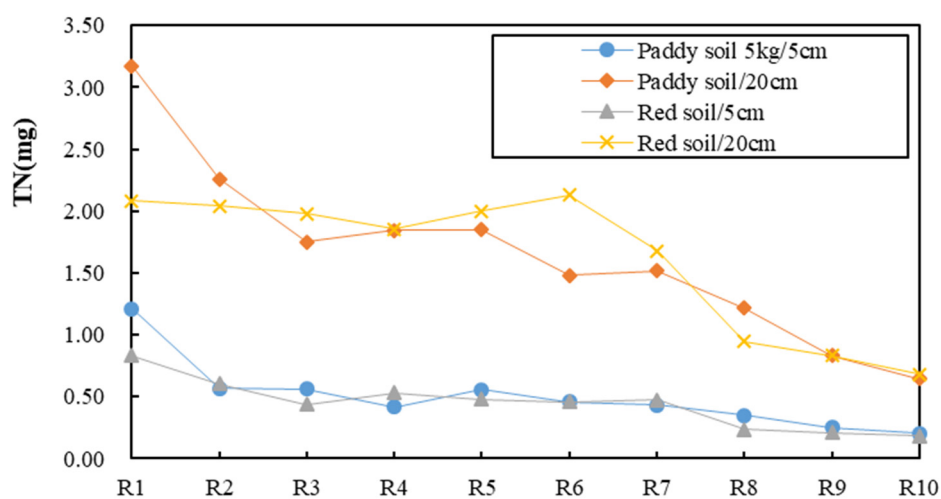


Figure S4. TN, TP, and COD loss concentrations under flooded irrigation



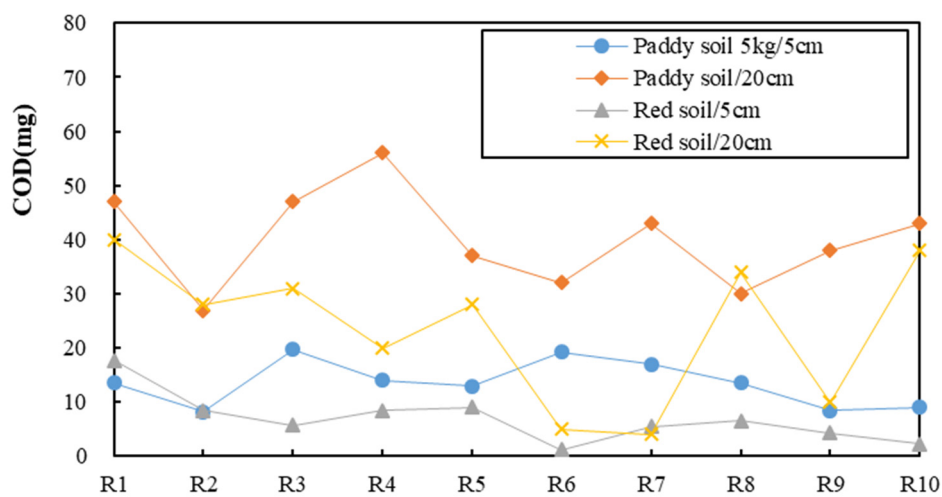
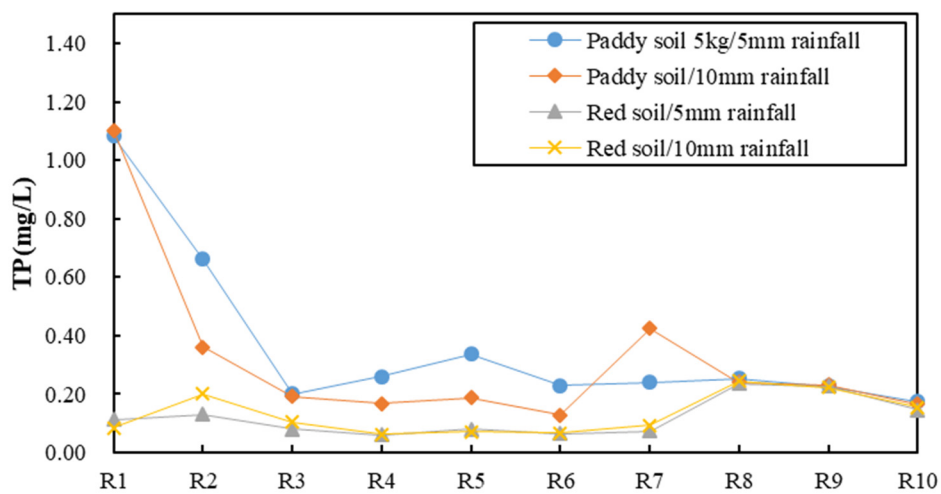
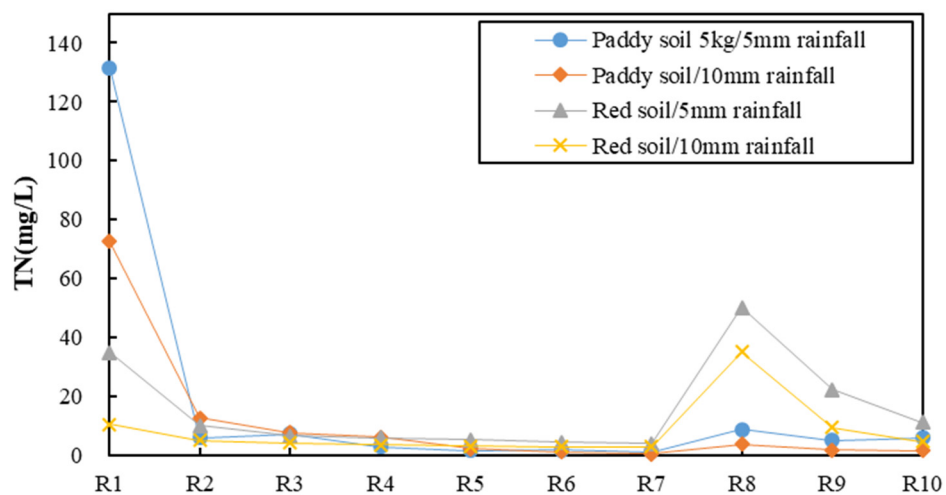
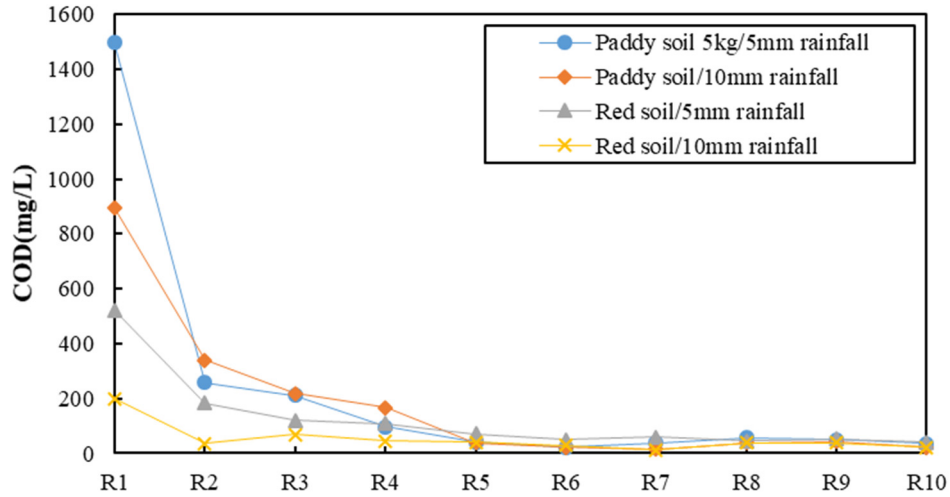
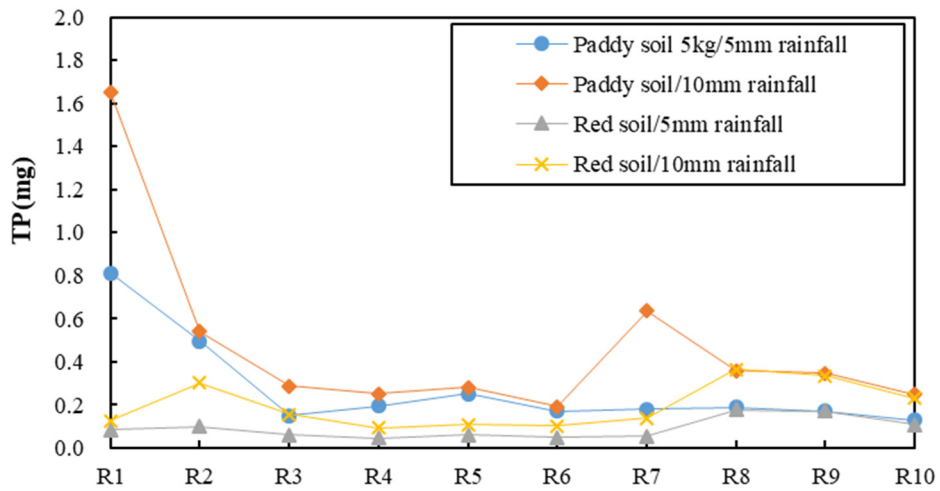
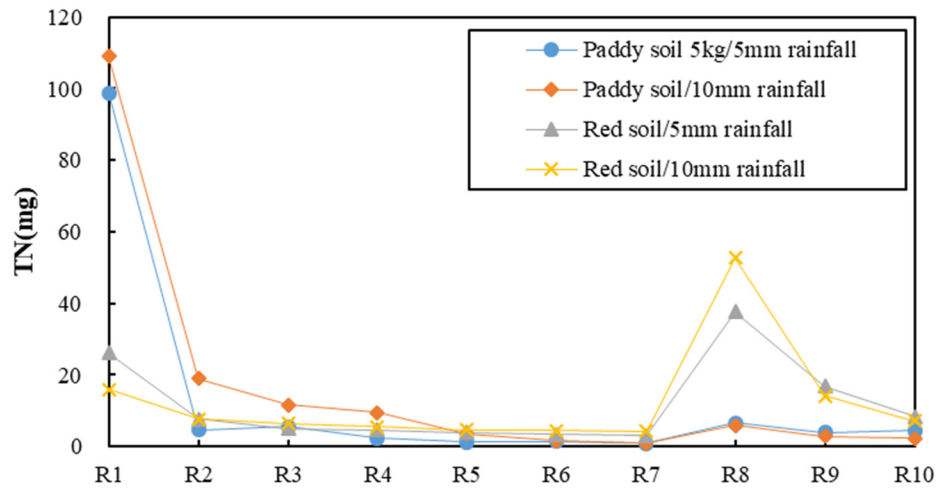


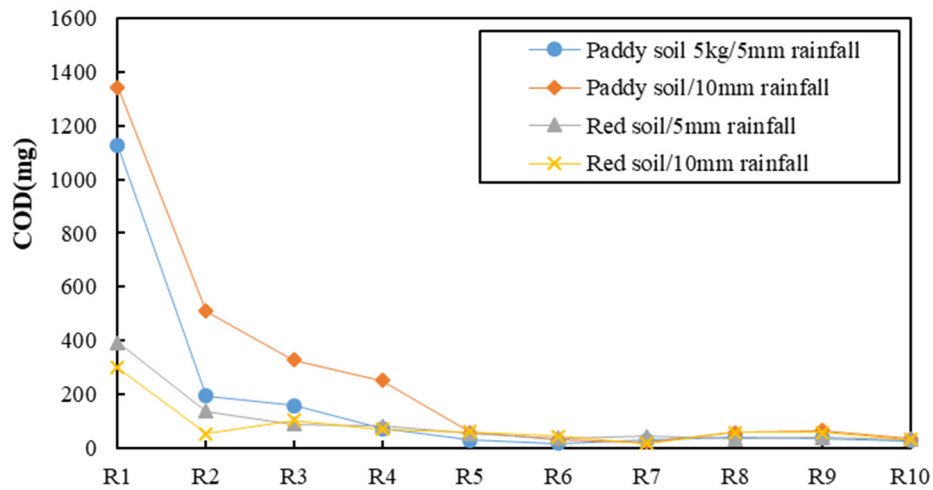
Figure S5. TN, TP, and COD loss amount under flooded irrigation



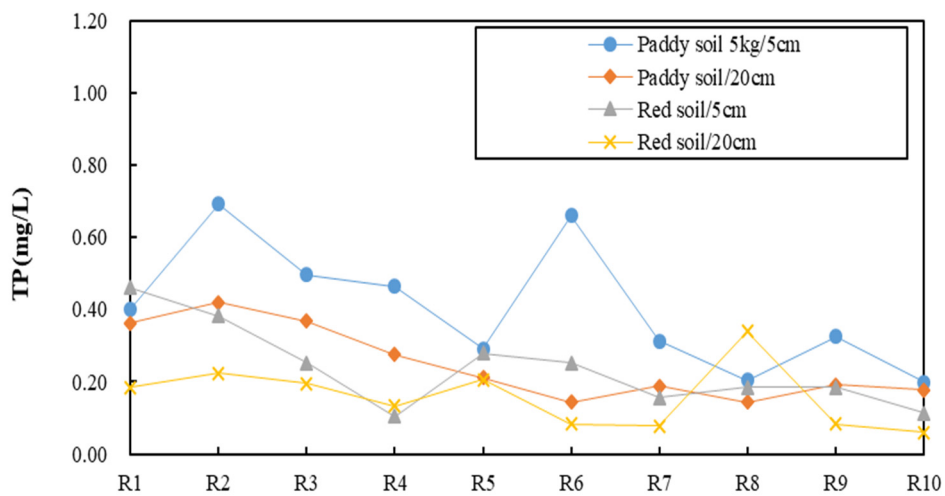
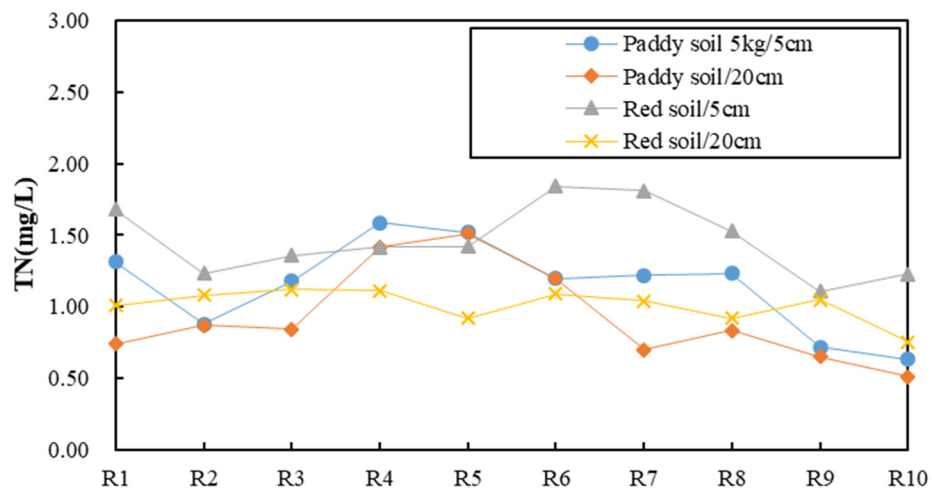


**Figure S6. Concentrations of COD, TN, and TP in the leaching liquid after application of commercial organic fertilizer under simulated rainfall conditions**

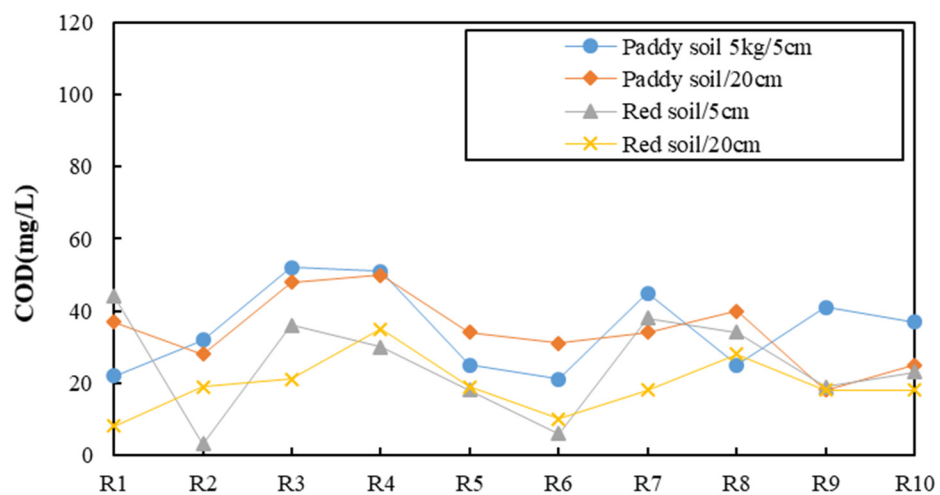




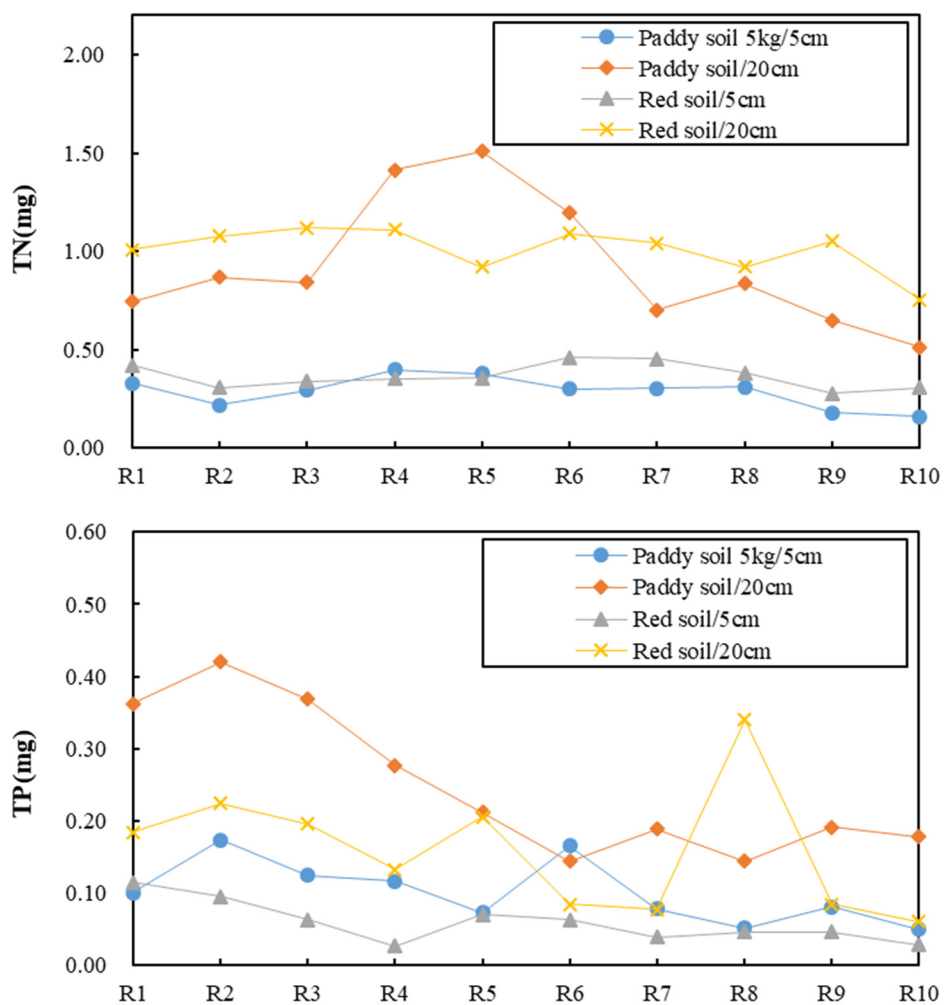
**Figure S7. Amount of COD, TN, and TP in the leaching liquid after application of commercial organic fertilizer under simulated rainfall conditions**

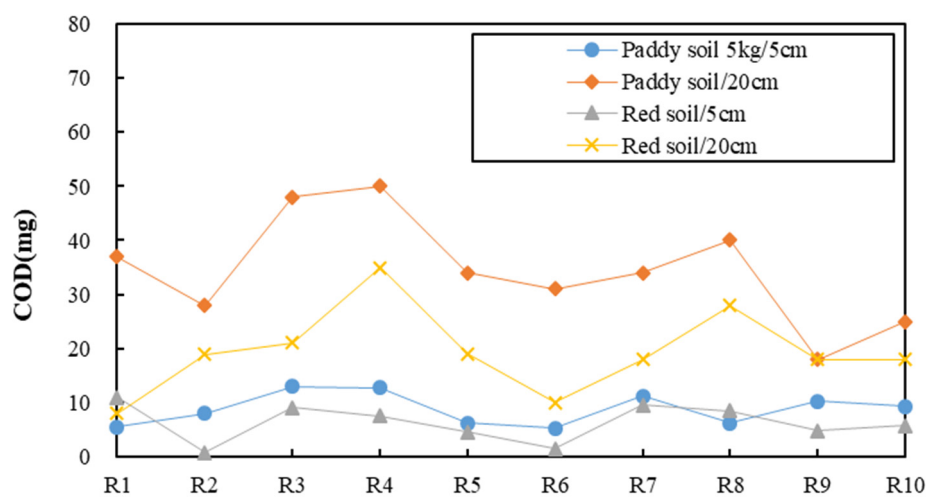






**Figure S8. Concentrations of COD, TN, and TP after commercial organic fertilizer application under flood conditions**





**Figure S9. Losses of COD, TN, and TP after commercial organic fertilizer application under flood conditions**