Table 1. Linear regression statistics for the relationship between log porewater SRP and log floodwater SRP concentration for each sampling.

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| --- | --- | --- | --- |
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|  |  |  |  |
| Day | R2¶ | Pr > F† | RMSE‡ |
| 2 | 0.73 | 0.0002 | 0.244 |
| 8 | 0.66 | 0.0004 | 0.213 |
| 15 | 0.64 | 0.001 | 0.380 |
| 23 | 0.75 | 0.0001 | 0.326 |
| 31¶† | 0.43 | 0.04 | 0.625 |
| 36 | 0.13 | 0.20 | 0.474 |
| 49 | 0.70 | 0.0002 | 0.254 |
| 75 | 0.40 | 0.02 | 0.417 |
| ¶ Coefficient of determination |
| † *P*-value for linear regression |
| ‡ Root mean square error |  |
| ¶† FW-SRP <detection limit in four soils and not included in regression |

Table 2. Linear regression statistics for porewater (PW-SRP)\_and floodwater soluble reactive phosphorus concentrations (FW-SRP) for each time point measured during the flooding as a function of total soil phosphorus, modified Morgan extractable phosphorus measured by ICP (MMP-ICP), and modified Morgan extractable phosphorus measured by molybdate colorimetry (MMP-Color).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|   |   |   |   |   |   |   |   |   |   |
|  | Total soil P |  | Log MMP-ICP |  | Log MMP-Color |  |
| Day | R2¶ | Pr > F† | RMSE‡ | R2 | Pr > F | RMSE | R2 | Pr > F | RMSE |
| 2-PW | 0.29 | 0.05 | 0.456 | 0.60 | 0.001 | 0.345 | 0.45 | 0.01 | 0.403 |
| 2-FW | 0.30 | 0.06 | 0.400 | 0.73 | 0.0002 | 0.243 | 0.82 | <.0001 | 0.200 |
| 8-PW | 0.11 | 0.24 | 0.629 | 0.34 | 0.03 | 0.541 | 0.63 | 0.0007 | 0.407 |
| 8-FW | 0.37 | 0.02 | 0.291 | 0.67 | 0.003 | 0.210 | 0.86 | <.0001 | 0.136 |
| 15-PW | 0.34 | 0.04 | 0.680 | 0.66 | 0.0008 | 0.490 | 0.65 | 0.0008 | 0.493 |
| 15-FW | 0.17 | 0.15 | 0.603 | 0.41 | 0.01 | 0.506 | 0.71 | 0.00 | 0.353 |
| 23-PW | 0.44 | 0.01 | 0.494 | 0.63 | 0.0007 | 0.400 | 0.81 | <.0001 | 0.287 |
| 23-FW | 0.21 | 0.12 | 0.573 | 0.59 | 0.0023 | 0.416 | 0.74 | 0.0002 | 0.330 |
| 31-PW | 0.53 | 0.0003 | 0.392 | 0.68 | 0.0003 | 0.322 | 0.60 | 0.001 | 0.363 |
| 31-FW¶†  | 0.15 | 0.28 | 0.785 | 0.37 | 0.06 | 0.647 | 0.59 | 0.009 | 0.543 |
| 36-PW | 0.44 | 0.01 | 0.383 | 0.35 | 0.03 | 0.412 | 0.48 | 0.006 | 0.369 |
| 36-FW | 0.10 | 0.26 | 0.482 | 0.27 | 0.06 | 0.434 | 0.25 | 0.07 | 0.441 |
| 49-PW | 0.39 | 0.02 | 0.368 | 0.55 | 0.003 | 0.386 | 0.75 | <.0001 | 0.289 |
| 49-FW | 0.38 | 0.02 | 0.368 | 0.72 | 0.0001 | 0.245 | 0.86 | <.0001 | 0.172 |
| 75-PW | 0.40 | 0.02 | 0.499 | 0.48 | 0.009 | 0.476 | 0.59 | 0.001 | 0.411 |
| 75-FW | 0.20 | 0.11 | 0.479 | 0.60 | 0.001 | 0.341 | 0.68 | 0.0003 | 0.303 |

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| ¶ Coefficient of determination |
| † *P*-value for linear regression |
| ‡ Root mean square error |
| ¶† FW-SRP <detection limit in 4 soils and not included in regression |

Table 3. Linear regression statistics for porewater (PW-SRP) and floodwater soluble reactive phosphorus concentrations (FW-SRP) for each time point measured during the flooding as a function of water extractable molybdate reactive phosphorus and soil pH.

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| --- | --- | --- | --- | --- | --- | --- |
|   |   |   |   |   |   |   |
|  | Water extractable SRP | Soil pH |  |  |
| Day | R2‡ | Pr > F¶ | RMSE† | R2 | Pr > F | RMSE |
| 2-PW | 0.38 | 0.02 | 0.427 | 0.16 | 0.16 | 0.500 |
| 2-FW | 0.59 | 0.002 | 0.303 | 0.53 | 0.005 | 0.324 |
| 8-PW | 0.41 | 0.01 | 0.514 | 0.37 | 0.02 | 0.532 |
| 8-FW | 0.70 | 0.0002 | 0.202 | 0.55 | 0.003 | 0.247 |
| 15-PW | 0.49 | 0.008 | 0.598 | 0.34 | 0.04 | 0.689 |
| 15-FW | 0.43 | 0.01 | 0.497 | 0.60 | 0.001 | 0.415 |
| 23-PW | 0.66 | 0.0004 | 0.385 | 0.50 | 0.005 | 0.469 |
| 23-FW | 0.51 | 0.006 | 0.453 | 0.40 | 0.02 | 0.500 |
| 31-PW | 0.66 | 0.0004 | 0.332 | 0.27 | 0.06 | 0.486 |
| 31-FW¶†  | 0.40 | 0.05 | 0.657 | 0.31 | 0.1 | 0.707 |
| 36-PW | 0.65 | 0.0005 | 0.305 | 0.24 | 0.08 | 0.447 |
| 36-FW | 0.32 | 0.04 | 0.421 | 0.08 | 0.33 | 0.489 |
| 49-PW | 0.72 | 0.0001 | 0.303 | 0.31 | 0.003 | 0.394 |
| 49-FW | 0.60 | 0.001 | 0.293 | 0.60 | 0.001 | 0.295 |
| 75-PW | 0.55 | 0.003 | 0.433 | 0.55 | 0.0024 | 0.431 |
| 75-FW | 0.39 | 0.02 | 0.421 | 0.49 | 0.006 | 0.385 |

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| ¶ Coefficient of determination |
| † *P*-value for linear regression |
| ‡ Root mean square error |
| ¶† FW-SRP <detection limit in four soils and not included in regression |