

Supplementary Materials

Supplementary Table S1

The main water quality characteristics of the shrimp nursery pond.

| Parameter | Value |
|---|-------|
| Salinity (g L ⁻¹) | 28.3 |
| Water temperature (°C) | 29.4 |
| Dissolved oxygen (mg L ⁻¹) | 5.6 |
| pH | 7.5 |
| Alkalinity (mg L ⁻¹ as CaCO ₃) | 194 |
| Total ammonia nitrogen (mg L ⁻¹) | 2.8 |
| Nitrite nitrogen (mg L ⁻¹) | 1.5 |
| Nitrate nitrogen (mg L ⁻¹) | 31.3 |
| Total nitrogen (mg L ⁻¹) | 57.1 |
| Biofloc volume (mL L ⁻¹) | 11.5 |
| Volatile suspended solids (mg L ⁻¹) | 284.2 |

Supplementary Table S2

The overall means (minimum, maximum) of selected water quality parameters from biofloc-based tank systems during an 8-week intensive production trial of *P. vannamei* with three input C/N ratios.

| Parameters | CN8 | CN12 | CN16 |
|---|----------------------|----------------------|----------------------|
| Salinity (g L ⁻¹) | 27.6 (25.0, 29.1) | 27.4 (24.7, 29.1) | 27.1 (24.2, 29.1) |
| Temperature (°C) | 28.6 (25.2, 31.3) | 28.5 (25.2, 31.5) | 28.8 (25.4, 31.9) |
| DO (mg L ⁻¹) | 6.1 (5.3, 7.3) | 6.2 (5.2, 7.4) | 5.9 (5.0, 7.1) |
| pH | 7.5 (7.0, 7.8) | 7.5 (7.0, 7.8) | 7.4 (6.9, 7.8) |
| Alkalinity (mg L ⁻¹ as CaCO ₃) | 168.4 (132.0, 210.0) | 183.6 (132.0, 225.0) | 214.3 (132.0, 241.0) |
| TAN (mg L ⁻¹) | 0.42 (0.04, 1.23) | 0.33 (0.02, 1.01) | 0.27 (0.01, 0.93) |
| NO ₂ ⁻ -N (mg L ⁻¹) | 0.32 (0.08, 1.26) | 0.46 (0.10, 1.71) | 0.53 (0.02, 2.23) |
| BFV (mL L ⁻¹) | 17.7 (9.5, 27.8) | 20.9 (9.5, 26.3) | 22.7 (9.5, 29.5) |
| VSS (mg L ⁻¹) | 201.9 (123.0, 292.5) | 217.5 (135.0, 303.7) | 233.6 (134.0, 321.0) |

DO: Dissolved oxygen; TAN: total ammonia nitrogen; BFV: biofloc volume; VSS: volatile suspended solids.