**Table S1** Physical and chemical Properties of Rhizosphere Soil of Different Plants

| | pH | EC (μs/cm) | Moisture content (%) | Organic matter (g/kg) | Alkaline nitrogen (mg/kg) | Available phosphorus (mg/kg) | Available potassium (mg/kg) |
|---|---|---|---|---|---|---|---|
| *Phragmites australis* (Cav.) Trin. ex Steud. | 9.536 | 602 | 11.41±0.85 | 13.52±0.52 | 39.9±0.70 | 21.66±0.64 | 110.89±0.56 |
| *Amaranthus retroflexus* L. | 9.204 | 785 | 16.10±0.86 | 16.82±0.41 | 46.67±0.81 | 23.98±0.72 | 157±0.18 |
| *Kalimeris indica* (L.) Sch.-Bip. | 9.214 | 359 | 8.36±1.13 | 10.78±0.27 | 11.43±0.40 | 21.33±0.94 | 76.11±0.69 |
| *Zea mays* L. | 9.681 | 1208 | 14.24±1.35 | 17.36±0.88 | 43.17±1.76 | 26.76±1.39 | 224.33±0.34 |

**Note:** Data are presented as mean ± standard deviation (SD) (n = 3).

**Table S2** Identification of plant growth-promoting ability of strains (phosphorus solubilization, potassium release, nitrogen fixation and iron carrier production)

| Strain | Soluble phosphorus | Potassium release | Nitrogen fixation | Iron-producing carrier |
|---|---|---|---|---|
| Y1 | ++ | +++ | ++ | - |
| Y2 | - | - | + | - |
| Y3 | + | + | + | ++ |
| Y4 | - | - | - | - |
| Y5 | ++ | ++ | + | ++ |
| Y6 | - | - | - | - |
| H0 | +++ | ++ | +++ | - |
| H1 | - | - | - | - |
| DH | +++ | +++ | +++ | +++ |
| H3 | - | - | - | - |
| W1 | + | - | ++ | - |
| W2 | - | - | - | - |
| W3 | - | - | - | - |
| W4 | - | - | - | - |

| | | | | |
|---|---|---|---|---|
| DR | +++ | +++ | +++ | ++ |
| KW6 | +++ | +++ | +++ | ++ |
| W7 | +++ | +++ | + | ++ |
| A1 | ++ | +++ | + | ++ |
| HA2 | +++ | +++ | +++ | +++ |
| HPA10 | +++ | +++ | +++ | +++ |
| B2 | +++ | ++ | ++ | ++ |
| PA1 | ++ | ++ | +++ | +++ |
| PA2 | ++ | ++ | + | ++ |
| KPA2 | ++ | +++ | +++ | ++ |
| HA4 | ++ | +++ | +++ | ++ |
| HPA5 | +++ | +++ | +++ | +++ |
| HPA6 | +++ | +++ | +++ | +++ |
| PA7 | +++ | +++ | +++ | ++ |
| DA | +++ | +++ | +++ | ++ |
| HPB2 | +++ | +++ | +++ | ++ |
| DC | +++ | +++ | +++ | ++ |
| PB4 | ++ | ++ | ++ | ++ |
| KA1 | +++ | +++ | +++ | +++ |
| T2 | ++ | +++ | ++ | ++ |
| WH2 | + | +++ | + | +++ |

**Note:** The symbol "+" indicates the strain is viable, with "+" to "+++" representing progressively enhanced growth-promoting ability, from weakest to strongest. The symbol "-" indicates the strain lacks the corresponding growth-promoting ability.

**Table S3** Determination of the maximum NaCl tolerance concentration of the strains

| | **DH** | **DR** | **KW6** | **HA2** | **HPA10** | **HPA2** | **HA4** | **HPA5** | **HPA6** | **DA** | **HPB2** | **DC** | **KA1** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3% | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5% | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7% | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8% | 1 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 |
| 9% | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 |
| 10% | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 11% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Note:** The symbol '1' indicates survival; the symbol '0' indicates no growth.

**Table S4** Determination of Alkali Resistance of Strains

| | **DH** | **DR** | **KW6** | **HA2** | **HPA10** | **HPA2** | **HA4** | **HPA5** | **HPA6** | **DA** | **HPB2** | **DC** | **KA1** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| pH8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| pH9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| pH10 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| pH11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Note:** The symbol '1' indicates survival; the symbol '0' indicates no growth.