Supplementary S1. Box-Behnken Design and experimental data for optimization of conditions for shoot regeneration.

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| --- | --- | --- | --- | --- |
| Runs | Variables (original coded values) | | | Response value *Y* (LPS) (%) |
| Darkness  (A, week) | GA3  (B, mg·L-1) | BAP  (C, mg·L-1) |
| 1 | 2(0) | 0.5 (1) | 0(-1) | 18.75 |
| 2 | 3(1) | 0.25(0) | 0.5 (1) | 37.5 |
| 3 | 2(0) | 0.25 (0) | 0.25 (0) | 56.25 |
| 4 | 2(0) | 0.25 (0) | 0.25(0) | 68.75 |
| 5 | 2(0) | 0 (-1) | 0 (-1) | 12.5 |
| 6 | 2(0) | 0 (-1) | 0.5 (1) | 43.75 |
| 7 | 2(0) | 0.5 (1) | 0.5 (1) | 56.25 |
| 8 | 1(-1) | 0.5 (1) | 0.25 (0) | 50 |
| 9 | 1(-1) | 0.25(0) | 0 (-1) | 62.5 |
| 10 | 1(-1) | 0 (-1) | 0.25 (0) | 37.5 |
| 11 | 2(0) | 0.25 (0) | 0.25 (0) | 56.25 |
| 12 | 1(-1) | 0.25 (0) | 0.5 (1) | 75 |
| 13 | 3(1) | 0.5 (1) | 0.25 (0) | 12.5 |
| 14 | 3(1) | 0.25 (0) | 0 (-1) | 25 |
| 15 | 3(1) | 0 (-1) | 0.25 (0) | 31.25 |

Supplementary S2. Effect of the medium on rooting cultures of the ‘Teapot’ jujube after 35 days of culture.

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| No. | I | II | III | Rooting efficiency /% | No. of roots per shoot | Root length /cm | Callus growth |
| Basal medium | IBA/ mg·L-1 | NAA/ mg·L-1 |
| 1 | 1/2MS | 0.2 | 0 | 7.67±0.15 | 1 | 0.53 | + |
| 2 | 1/2MS | 0.2 | 0.2 | 5.33±0.38 | 2 | 0.95±0.11 | +++ |
| 3 | 1/2MS | 0.4 | 0 | 13.33±0.30 | 1.75±0.29 | 0.55±0.02 | ++ |
| 4 | 1/2MS | 0.4 | 0.2 | 7.67±0.15 | 1 | 1.25 | +++ |
| 5 | modified 1/2MS | 0.2 | 0 | 13.33±0.18 | 1 | 0.61±0.04 | + |
| 6 | modified 1/2MS | 0.2 | 0.2 | 7.67±0.15 | 1 | 0.72 | +++ |
| 7 | modified 1/2MS | 0.4 | 0 | 100 | 1.93±0.49 | 3.67±0.14 | + |
| 8 | modified 1/2MS | 0.4 | 0.2 | 60.67±0.37 | 2.71±0.92 | 0.84±0.03 | +++ |

Callus growth degree: “+” light; “++”moderate; “+++”high