

Figure S1: PCR amplification of the *rol*B gene in hairy roots of *Cichorium intybus*. 1-13: Hairy roots, 14: Normal root, 15: *A. rhizogenes* plasmid DNA (positive control), 16: negative control, 17: hairy root lines, 18: DNA Ladder (100 bp, Yektataghiz, Iran).



Figure S2: Hairy roots propagation. **a,b** Single-line which grown and filled up 50% of the solid medium plates in two weeks after selection; **c,d** Selected hairy root in liquid MS medium. (a-d:1x).



Figure S3: Effects of sucrose concentrations on dry weight /fresh weight percent in select lines. The different letters denote a statistically significant difference at $P \le 0.05$, as determined by Duncan's multiple range tests.