Supplementary Material

Genetic Transformation of Potato without Antibiotic-Assisted Selection

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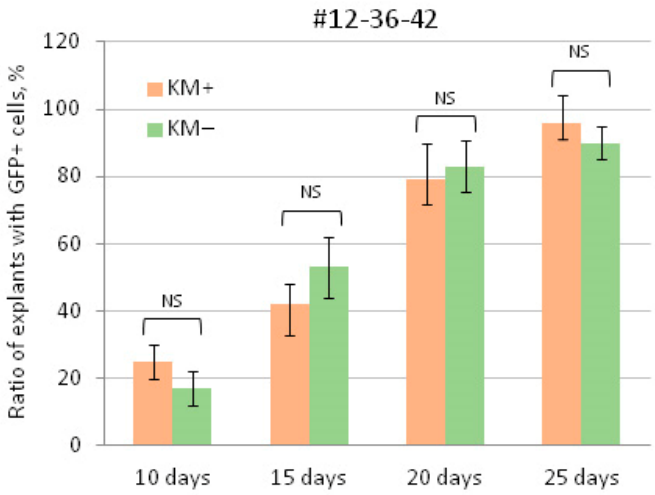

Figure S1. The percentage of explants displaying the GFP expression in cells of potato cv. #12-36-42 under selective- (Km+) and non-selective (KM-) cultivation. ns - indicate statistically non significant differences calculated according t-test ($p \leq 0.05$).

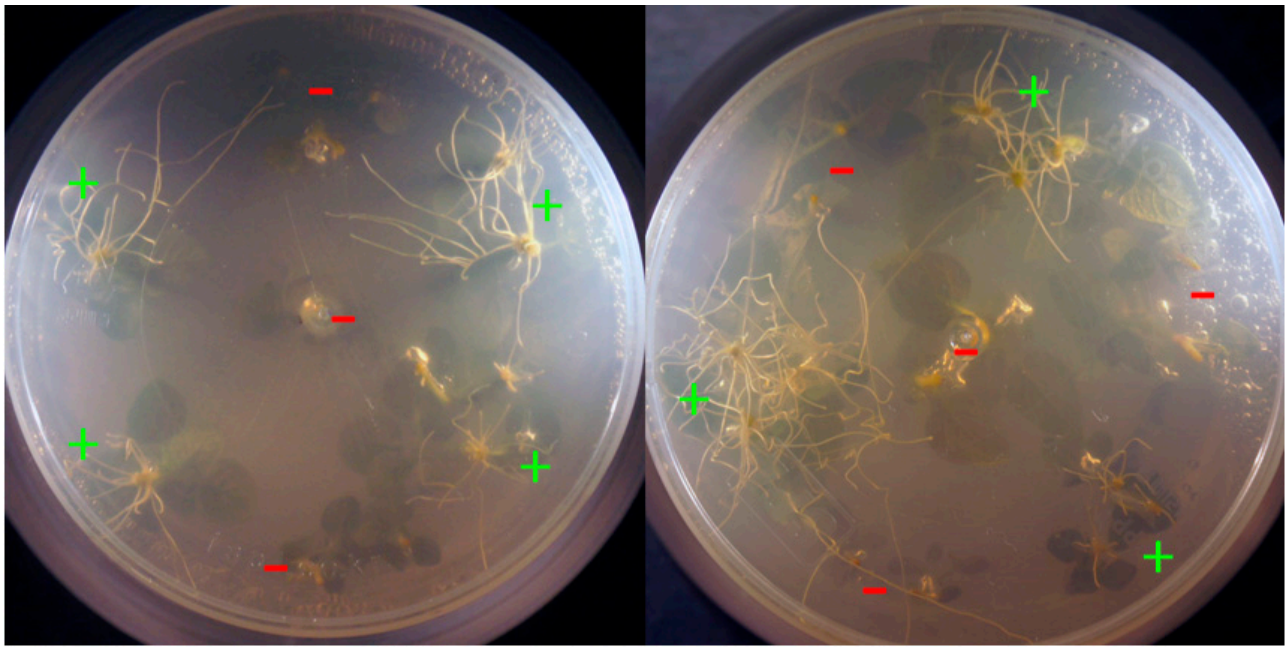

Figure S2. Identification of transgenic events by *in vitro* rooting of putative transgenic plants (cv. #12-36-42) on the medium, supplemented with a lethal dose of kanamicyn (100 mg mg L^{-1})."+" – indicated transgenic plants successfully rooted after 15 days of cultivation;."-" – indicated non-transgenic plants failed to rooting

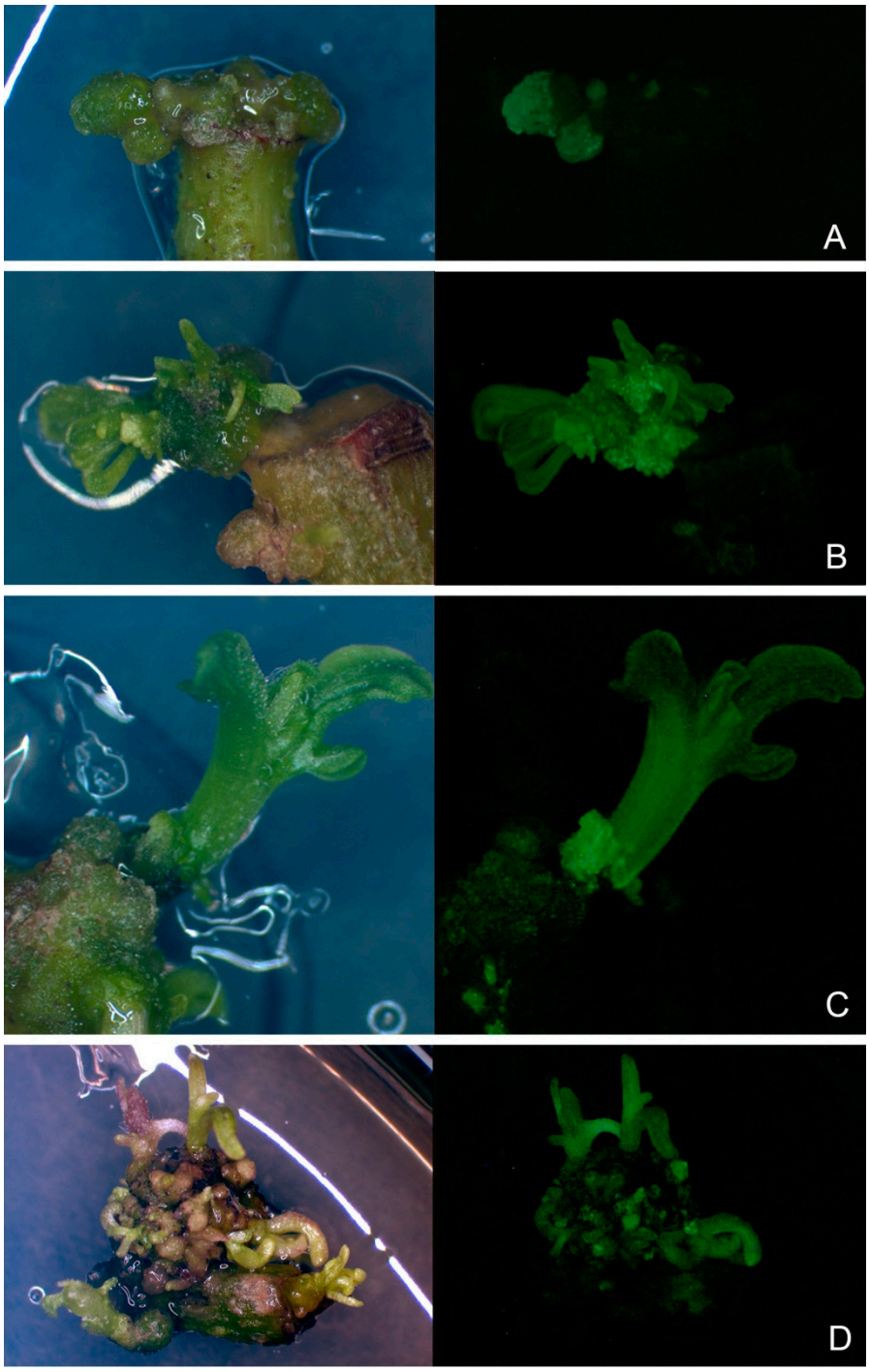

Figure S3. Regeneration of transgenic potato plants under kanamycin assisted conditions. (**A**) Formation of GFP expressing callus on the cut edge of explant of 'Chicago'; (**B**) Development of mumerose transgenic buds and plantlets with the GFP expression from the callus of 'Chicago'; (**C**) Regeneration of the single transgenic plantlet of 'La Strada' with a intensive green fluorescence throughout all tissues; (**D**) development of multople transgenic shoots of 'Pirol' from cultivated explant at 65 day after agrobacterial transformation.

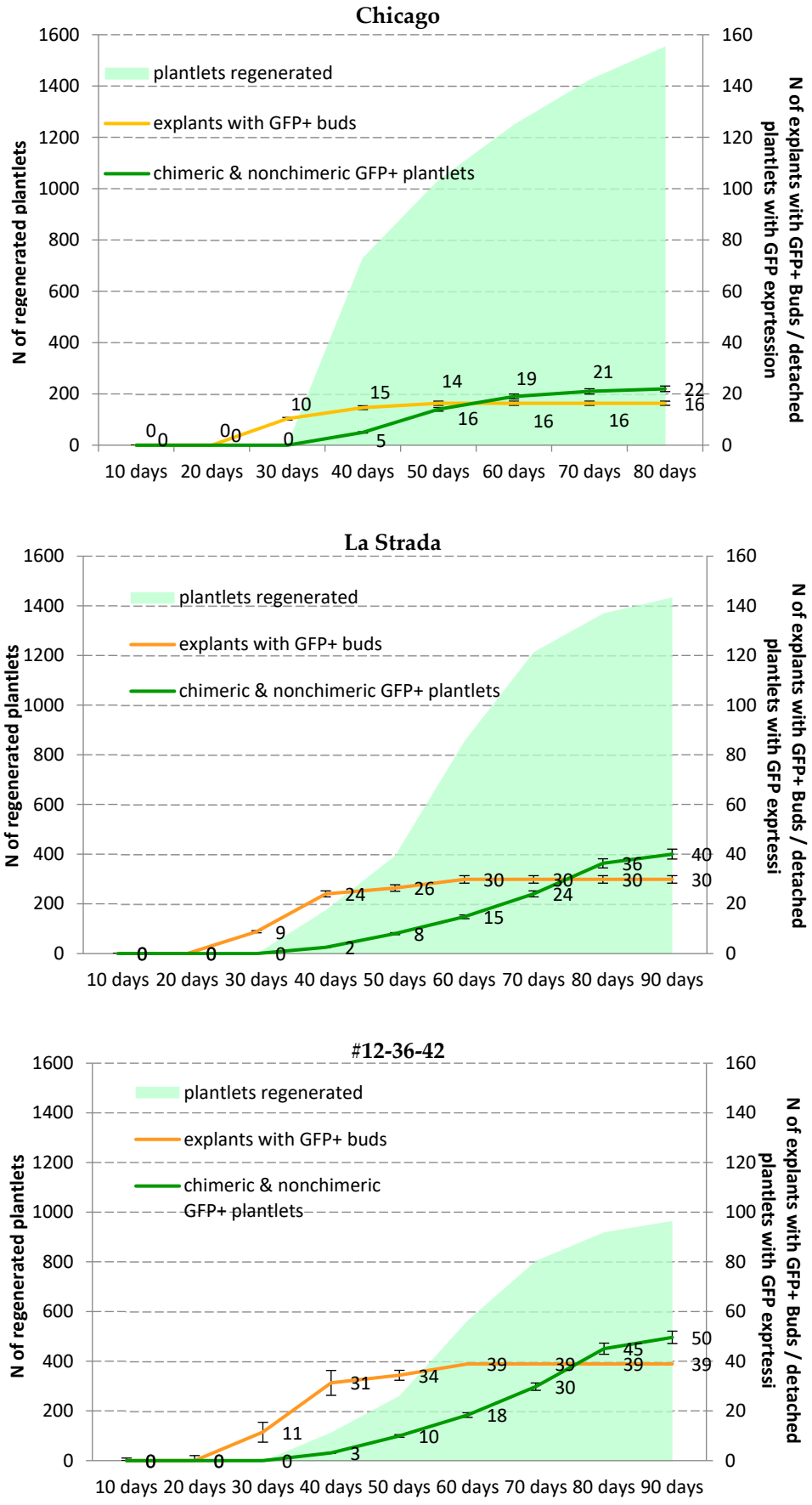

Figure S4. Genotype-dependant timeline for formation of GFP expressed buds and plantlets of 'Chicago' ('early/intermediate' type of regeneration), 'La Srada' ('intermediate' type of regeneration) and #12-36-42 (intermediate/late type of regeneration) under non selective conditions in comparison with the all regenerated shoots.

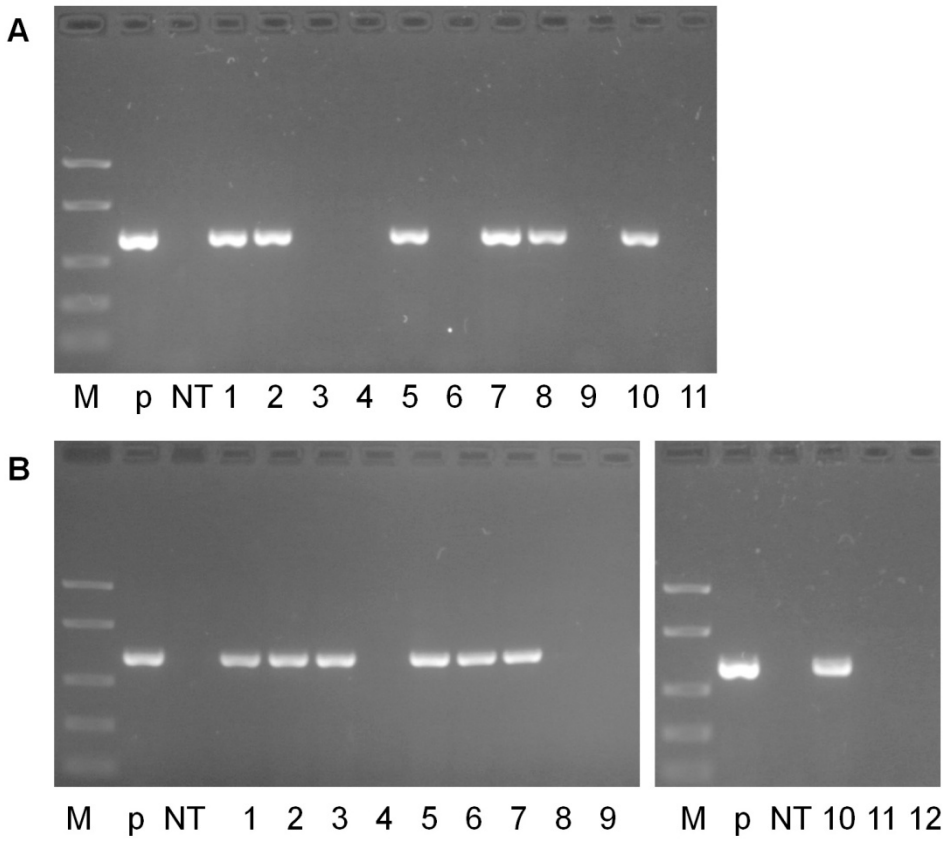

Figure S5. Putative transgenic plants of potato cv. 'Pirol' produced within experiments of antibiotic-free transformation are analyzed for the presence of *RFP* gene by PCR amplification; (**A**,**B**) examples of PCR analysis of plants collected in two indepenfdant expriments; lane M, DNA ladder as molecular weight marker; lane p, DNA of the plasmid; lane NT, non transgenic potato plant 'Pirol'; 1-12, putative transformant lines; the size of amplified fragment is 537 bp.