Table S1. Oligonucleotide primers used for quantitative reverse transcription-PCR analysis.

Gene	Accession number	Forward primer (5' → 3')	Reverse primer (5' → 3')
ACT8	AT1G49240	ACTGTGCCTATCTACGAGGGTTTC	CCCGTTCTGCTGTTGTGGT
MGD1	AT4G31780	GCAGGACTTGAAACATCACAAATC	GCGAACTGGTTTCACAAAGGA
MGD2	AT5G20410	AACATGTCTCCCTTAGTAGTTCTTTTGTC	GTTGATATTGTTAATGGCTAACAATAATGC
MGD3	AT2G11810	GGATATCCATCATCTATCCCAACAA	GATAAAAGAATGACAAACCACTAGAGAATATAC
DGD1	AT3G11670	CTGAAGAGAGATCCCGTGGTG	TCCCAAGTTCGCTTTTGTGTT
DGD2	AT4G00550	TGCAGAACCTATGACGATGGA	GCTCTGTAAGTTGCGATGGTTG
HEMA1	AT1G58290	TAAGATTAGCTTCCCCACAAACTC	AGCTCGCTTATAGCTTCACAACAC
CHLH	AT5G13630	TGGTAGAGAGACAGAAGCTCGAAA	CCAAAGAACCTGCCCAAGAG
LHCB1.2	AT1G29910	GTGTGACAATGAGGAAGACTGTTGCC	AAATGCTCTGAGCGTGGACCAAGCTA
LHCB6	AT1G15820	GGACTTTGAGAAGCTGGAGAGG	ACAAACCAAGAGCACCGAGAG

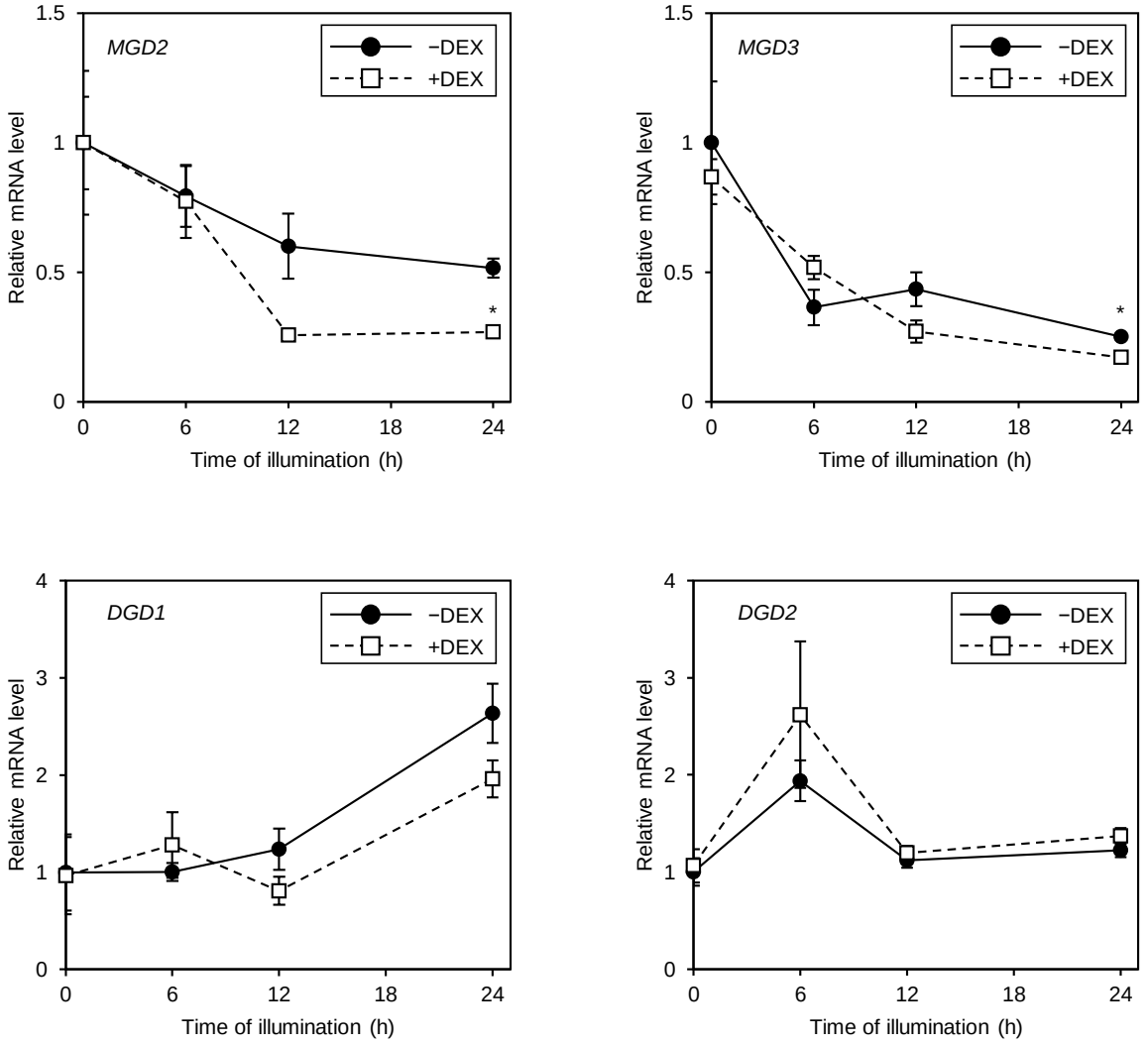

Fig. S1. mRNA levels of *MGD2*, *MGD3*, *DGD1* and *DGD2* during greening of dark-grown *amiR-MGD1* seedlings. Seedlings were illuminated for 6, 12 and 24 h after 4-d growth in the dark (0 h) in the absence (−) or presence (+) of DEX. Fold difference from the −DEX control at 0 h after normalization to the control gene *ACTIN8* is shown for each gene. Data are mean ± SE from three independent experiments. Asterisks indicate significant difference from the −DEX control ($P < 0.05$, Student's *t*-test).

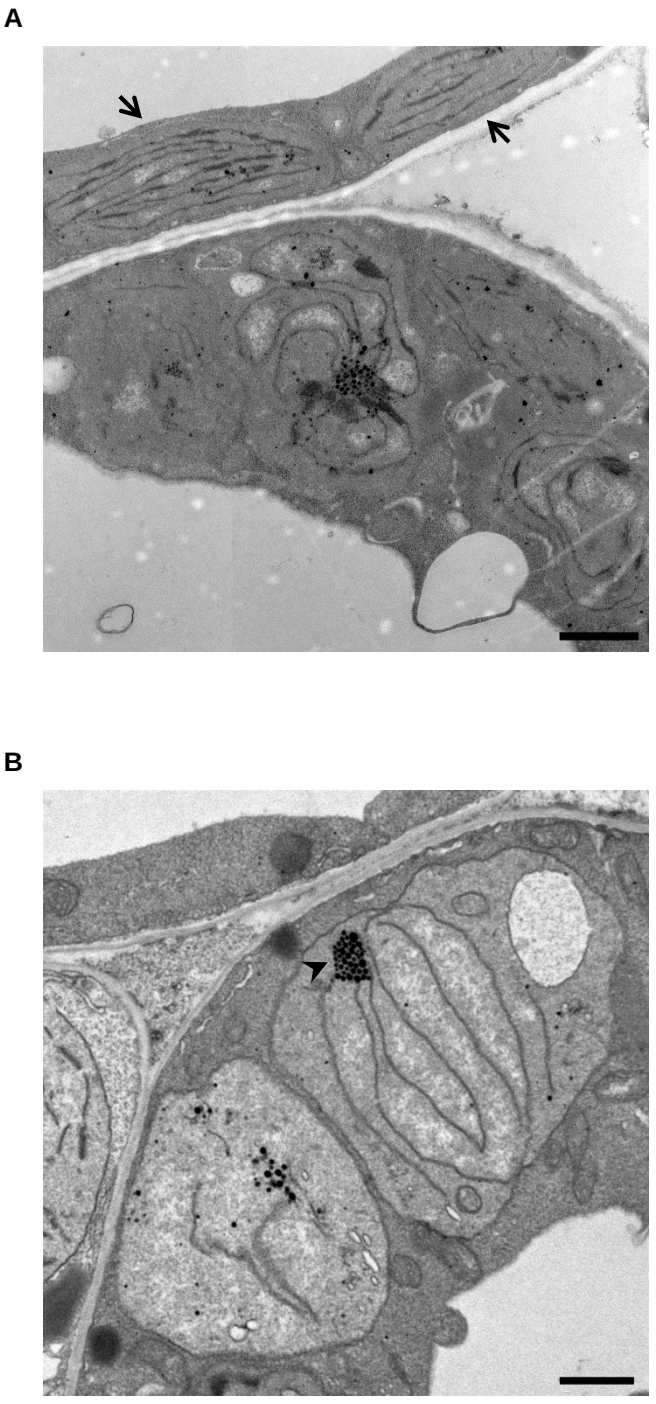

Fig. S2. Ultrastructure of cotyledon plastids in DEX-treated *amiR-MGD1* seedlings illuminated for (A) 6 h and (B) 20 h after 4-d growth in the dark. Arrows in (A) indicate plastids with thylakoid-like membrane structures. An arrowhead in (B) indicates a cluster of high electron-dense particles similar to plastoglobuli. Bars = 1.0 μm.

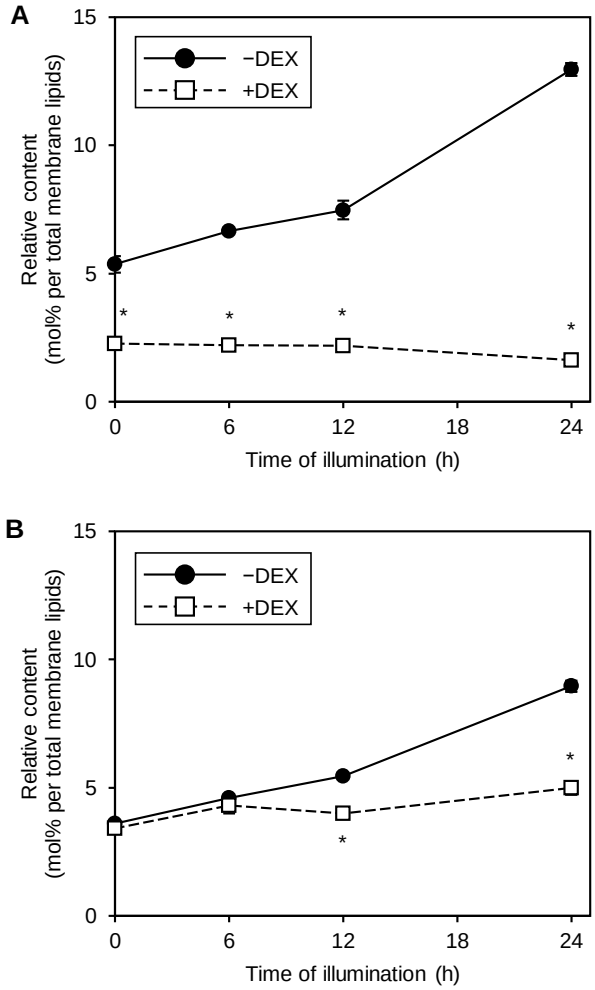

Fig. S3. Changes in relative galactolipid content during greening of dark-grown *amiR-MGD1* seedlings. Proportions (mol%) of (A) MGDG and (B) DGDG in total membrane lipids. Seedlings were illuminated for indicated hours after 4-d growth in the dark in the absence (−) or presence (+) of DEX. Data are means ± SE from three independent experiments. Asterisks indicate significant difference from the −DEX control ($P < 0.05$, Student's *t*-test).

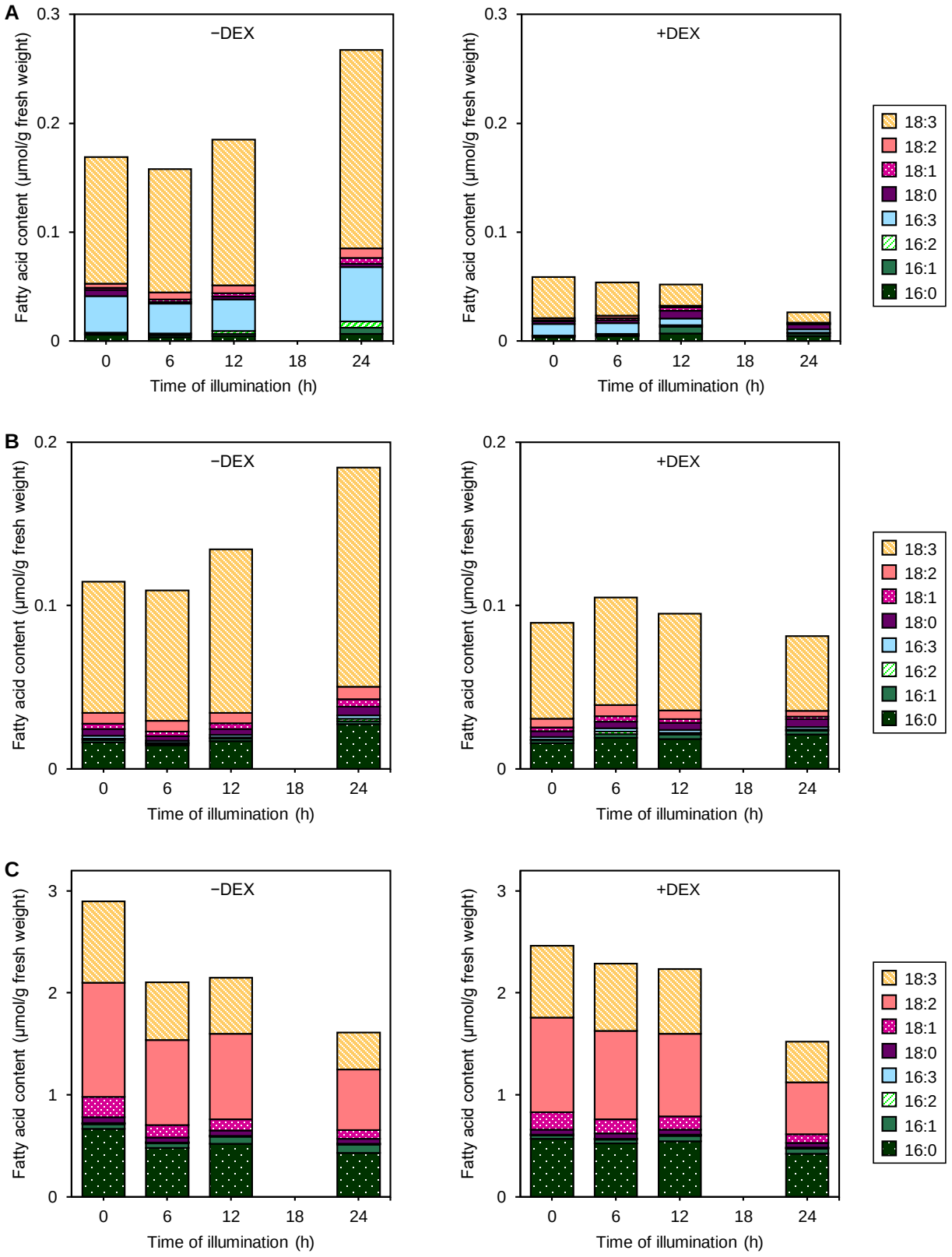

Fig. S4. Changes in absolute amount of fatty acids of galactolipids during greening of dark-grown *amiR-MGD1* seedlings. Fatty acid content of (A) MGDG, (B) DGDG and (C) other membrane lipids shown on a fresh weight basis. Seedlings were illuminated for indicated hours after 4-d growth in the dark in the absence (−) or presence (+) of DEX. Data are means from three independent experiments.

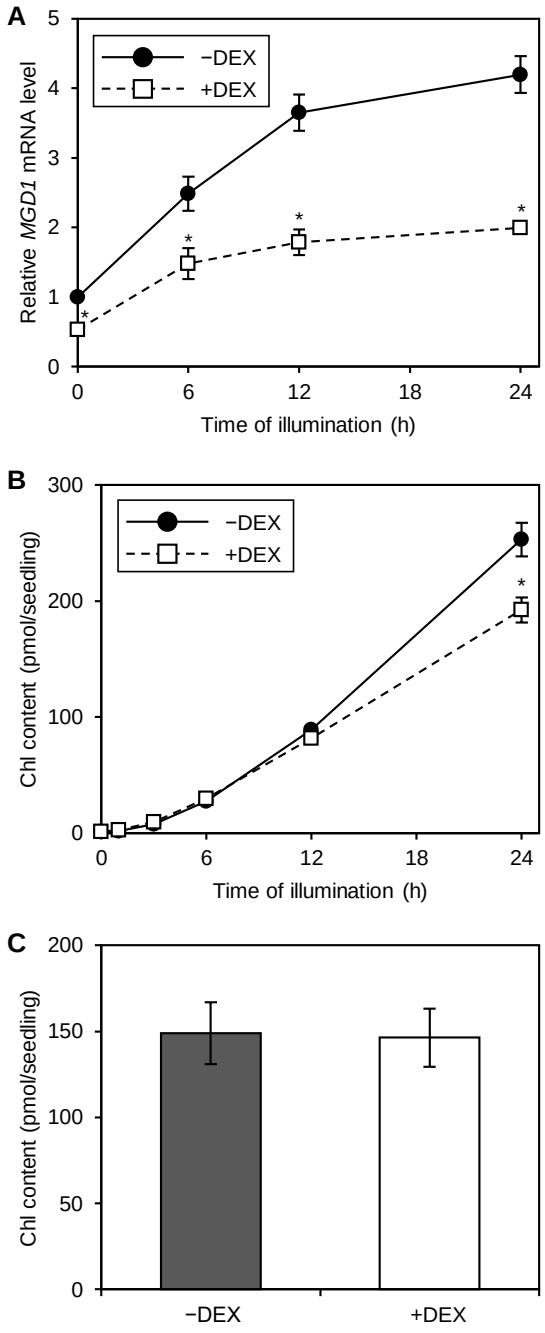

Fig. S5. Effects of DEX treatment to a weak *amiR-MGD1* line (L4g) and wild type (Landsberg *erecta*) during greening. Changes in (A) *MGD1* mRNA levels and (B) Chl content in L4g seedlings after illumination in the absence (−) or presence (+) of DEX. In (A), *MGD1* mRNA levels were presented as fold difference from the −DEX control at 0 h of illumination after normalization to the control gene *ACTIN8*. In (B), amount of protochlorophyllide (Fujii et al., 2017) is shown for 0 h instead of Chl amount. (C) Chl content in wild-type seedlings illuminated for 24 h. In (A) and (C), data are means ± SE from three independent experiments. In (B), data are means ± SE from 15 (0 h) or three (1, 3, 6, 12, 24 h) independent experiments. Asterisks indicate significant difference from the −DEX control ($P < 0.05$, Student's *t*-test). In all experiments, plants were grown for 4 d in the dark and then illuminated for indicated hours.

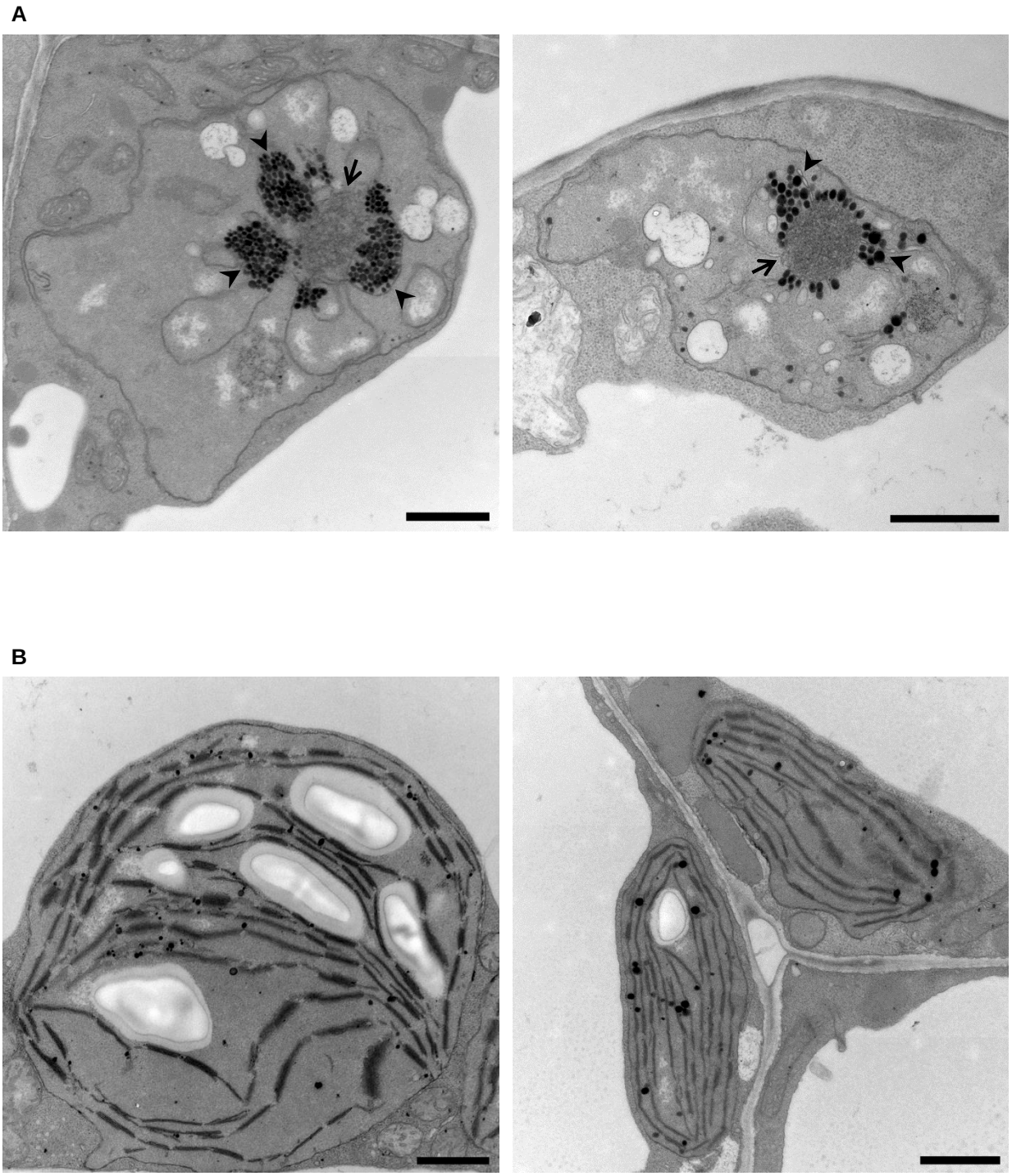

Fig. S6. Ultrastructure of cotyledon plastids in *dgd1* seedlings illuminated for (A) 24 h and (B) 72 h after 4-d growth in the dark. Arrows and arrowheads in (A) indicate circular aggregates of membrane tubules and clusters of plastoglobule-like high electron-dense particles, respectively. In (B), a plastid with thylakoid-free areas (left) and that with underdeveloped thylakoid membranes (right) are shown. Bars = 1.0 μm.

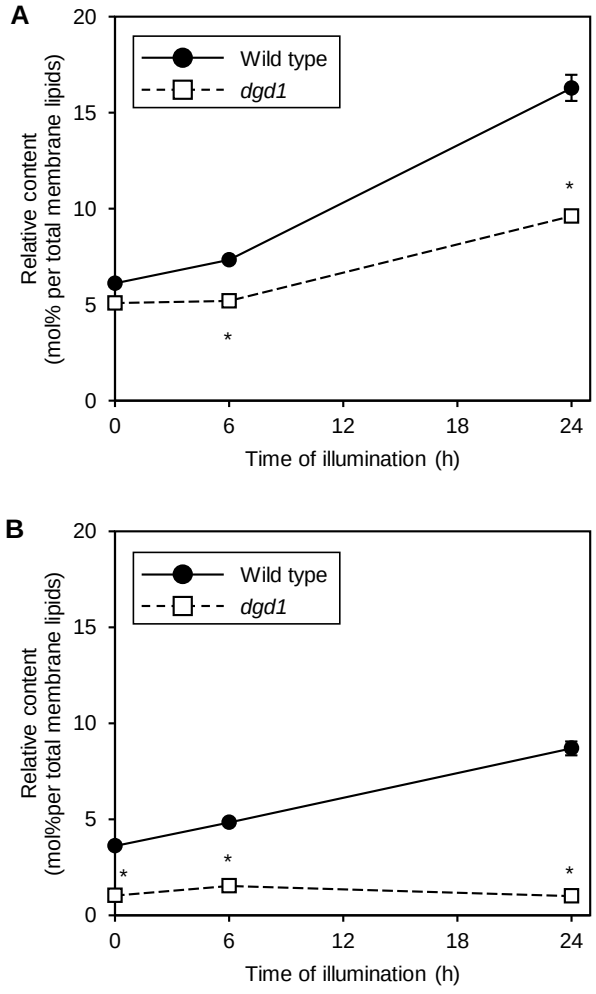

Fig. S7. Changes in relative galactolipid content during greening of dark-grown seedlings of wild type and the *dgd1* mutant. Proportions (mol%) of (A) MGDG and (B) DGDG in total membrane lipids. Plants were grown for 4 d in the dark and then illuminated for indicated hours. Data are means ± SE from three independent experiments. Asterisks indicate significant difference from the wild type ($P < 0.05$, Student's *t*-test).

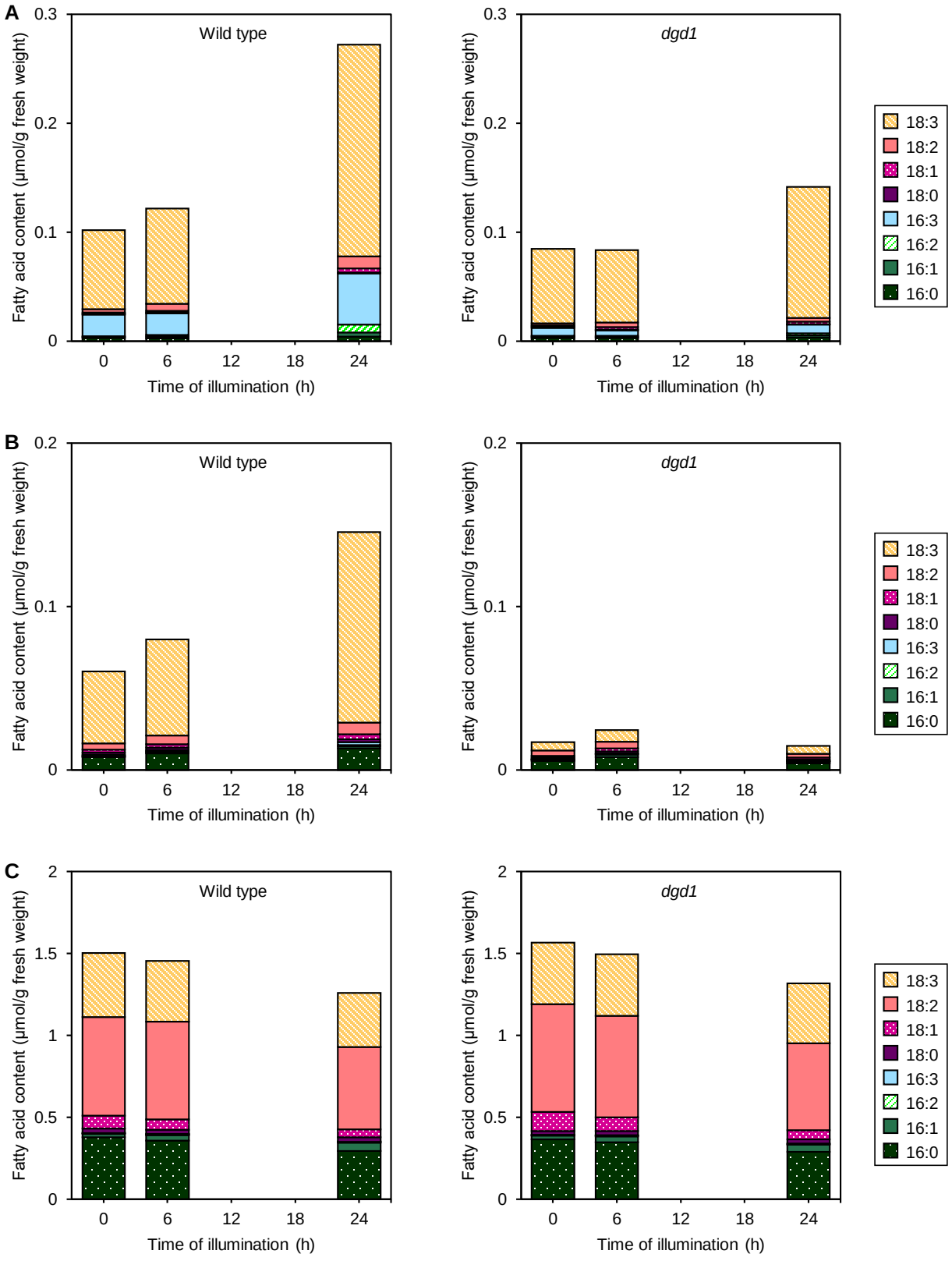

Fig. S8. Changes in in absolute amount of fatty acids of galactolipids during greening of dark-grown seedlings of wild type and the *dgd1* mutant. Fatty acid content of (A) MGDG, (B) DGDG and (C) other membrane lipids was shown on a fresh weight basis. Seedlings were illuminated for indicated hours after 4-d growth in the dark. Data are means from three independent experiments.