

Figure S1. Southern blot confirmation for the MoMyb13 knockout mutants. (A) Two mutants $\Delta momyb13-11$ and $\Delta momyb13-16$ were confirmed by Southern blot. The cartoon showed how the target gene *MoMYB13* was replaced. The 1000 bp downstream flanking sequence of MoMyb13 (showed as a black circle) was selected to be labeled as the blotting probe. The *Pst* I (P) and *Sac* I (Sa) were used to digest the genome. After blotting, a 4210bp band appeared in the Ku80 lane, and a 2989bp appeared in the mutant lane indicate that *MoMYB13* was successfully replaced. The arrow represents the right bands in mutant. (B) The colony appearances of two MoMyb13 knockout mutants.

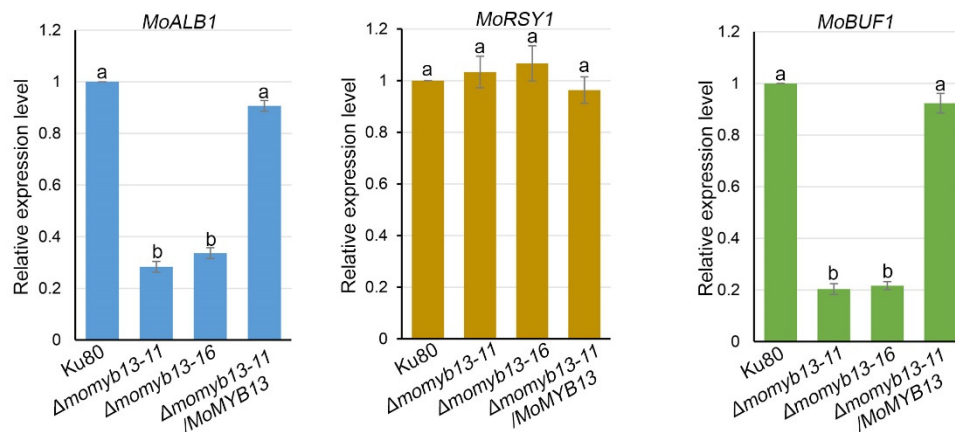


Figure S2. Bar chart showing the relative expression of three pigment related genes in MoMyb13 mutant $\Delta momyb13-11$. The data shows the mean \pm standard errors (SE, n=3). The t-test was performed ($P < 0.05$). All the experiments were performed in replicates.

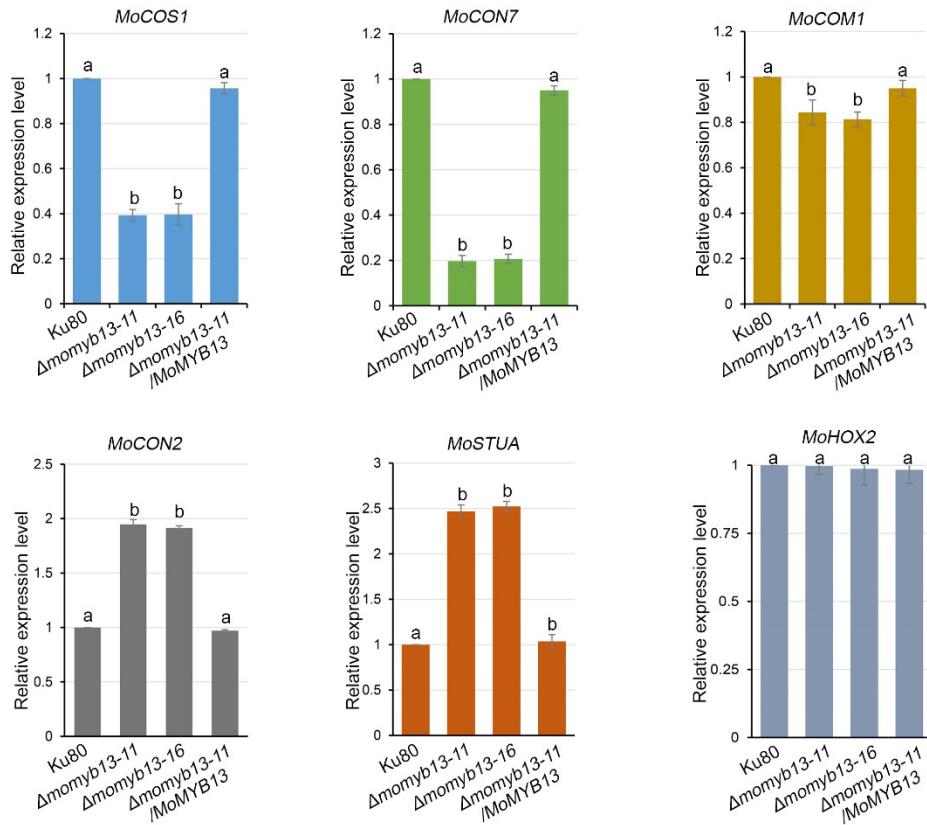


Figure S3. Bar chart showing the relative expression of six condition related genes in MoMyb13 mutant *Δmomyb13-11*. The data shows the mean \pm standard errors (SE, n=3). The t-test was performed ($P < 0.05$). All the experiments were performed in replicates

Table S1. Primers used in this study

Name	Sequences	Application
MGG_14558-UP-F	aagggaacaaaagctggtaccATGTGCGTACCTATTGCAACCT	Gene deletion
MGG_14558-UP-R	tcagttaacgtgacaagcttGGTACCGGTCACGATCATCATA	Gene deletion
MGG_14558-DW-F	cgggaaccagtttaacctgcagAGGAAAGGAAAGTACTTGATGG	Gene deletion
MGG_14558-DW-R	cgctctagaactagtggatccAAGTCTTGCGGTAGTCGAGCTT	Gene deletion
14558-BamH1-F	cgctctagaactagtggatccACAGCCAACATCATGCAAGACA	Gene complementation
14558-EcoR1-R	gccttgctcaccatgaattcTCGCCCGTATCGATCCCG	Gene complementation
MGG_14558-TZ-F	TGCGTGTTTAGAGCTTGTGC	Southern blot probe
MGG_14558-TZ-R	ATTGGCGTGCCTTTTGGT	Southern blot probe
MoCOS1-F	CCCTCAGCCACATACAACCT	qRT-PCR
MoCOS1-R	AGCCTTCGCTCGATACTGAA	qRT-PCR
MoCOM1-F	ACCGATTCTGACGAATCCAG	qRT-PCR
MoCOM1-R	CTGGAAGTGTCTCCTCCTC	qRT-PCR
MoCON7-F	GCAAGAAAGTGCGTTCAAACA	qRT-PCR
MoCON7-R	TCTCCAAGTGTGCCACTATG	qRT-PCR

MoCON2-F	GGAGCCGAAAACATCAACAT	qRT-PCR
MoCON2-R	GTTGGTTGGTCCATGCTCTT	qRT-PCR
MoSTUA-F	CAACATGGGCAGCTCTGATA	qRT-PCR
MoSTUA-R	CCTGCATGCTTTGTAGCGTA	qRT-PCR
MoHOX2-F	CGATAATTGCTCCCACACCT	qRT-PCR
MoHOX2-R	GAAGGAGTCGGTGGTGACAT	qRT-PCR
ACTIN-F	CCATGTACCCTGGTCTTTTCG	qRT-PCR
ACTIN-R	TTCGAGATCCACATCTGCTG	qRT-PCR
MoALB1-F	GCAAGGTCAACCAGAAGCTC	qRT-PCR
MoALB1-R	TGCGACCACTGACAGTAAGC	qRT-PCR
MoRSY1-F	GCATTGACTACCGCTCCTTC	qRT-PCR
MoRSY1-R	CTCCTTCATGGTGGTGCCT	qRT-PCR
MoBUF1-F	CCTGAGGAATTTGACCGTGT	qRT-PCR
MoBUF1-R	ATGGAGCCCATCAGAATCAG	qRT-PCR
MGG_01173-F	CCCTACACTCCCTGCTCCG	qRT-PCR
MGG_01173-R	CAAGGATGGGCAGGACGC	qRT-PCR
MGG_09134-F	GCAGCGGAGCCTACAACAA	qRT-PCR
MGG_09134-R	TCCAAGAACAGGGAGCAGACA	qRT-PCR
MGG_10105-F	GCGGCAGCGGAGACTATGA	qRT-PCR
MGG_10105-R	GGCGCAAATGTCGGTGAA	qRT-PCR
MPG1-F	TGCAACAGCAAGGAGCTTAA	qRT-PCR
MPG1-R	CGGAGCAGCACGAAACG	qRT-PCR
MPG1-over-F	taccaagcatccaatctagaATGTTCTCCCTCAAGACCGTTG	MPG1 overexpression in MoMyb13 mutant
MPG1-over-R	gataagcttgatatcgaattcTTAGCTCAGGATAGGAGTGCCTG	MPG1 overexpression in MoMyb13 mutant