APPENDIX

Appendix Table 1 ACC and IAA content in pollinia of *Dendrobium* cultivars

Cultivar	ACC content[1] (nmol ACC g^{-1}FW)	IAA content[2] (μg IAA g^{-1}FW)
Miss Teen	491.63b	43.32c
Karen	559.79b	96.86b
Pompadour	547.59b	139.57b
Sakura	1245.80a	352.39a
Willie	996.39a	310.40a
F-test	**	**

[1,2] Means within columns not sharing the same letter are significantly different at $P = 0.05$ (DMRT) and ** = significant at $P = 0.01$

Appendix Table 2 Pollinia weight, ACC, and IAA content in pollinia of various *Dendrobium* cultivars.

Cultivar	Pollinia weight (mg/flower)	ACC concentration (nmol ACC / flower)	IAA concentration (μg IAA /flower)
Miss Teen	0.837	0.4105	0.0370
Karen	0.843	0.4718	0.0311
Pompadour	1.145	0.6108	0.1556
Sakura	1.500	1.8687	0.5286
Willie	0.964	0.9608	0.2993

Appendix Table 3 Specific upstream and downstream primers for PCR reaction.

Gene	Primers
ACO	ACO-Den F_1 5'- ATG GAG CTT CTT GAG GGT TC-3'
945 bp	ACO-Den R 5'-TCA AGC AGT AGG AAT CGG CTG –3'
Actin	Den-Actin F 5'- AAG CTG TTC TTT CCC TAT ATG CTA GTG G-3'
176 bp	Den-Actin R 5'-CTT CTC CTT GAT GTC CCT GAC AAT TT-3'

Appendix Table 4 The components of PCR reaction DIG labeling

Component	Dig lebeled probe	Unlabeled DNA control
Sterile H_2O	Variable	Variable
10x PCR buffer with $MgCl_2$	5 μl	5 μl
PCR DIG labeling mix	5 μl	-
dNTPs stock solution	-	5 μl
Forward primer	1 μl	1 μl
Reverse primer	1 μl	1 μl
Expand enzyme mix	0.75 μl	0.75 μl
Template (10 pg)	Variable	Variable
Final volume	50 μl	50 μl

Appendix Table 5 The size of amplified *Den-ACO* fragments and the sequences of amplified clone from the sequencer.

Gene	**Product size**	**Sequence**
ACO	945 bp	ATGGAGCTTCTTGAGGGTTCTCAGCGCTCAGACGCCA TGCTGTTCTTCGAGACGCCTGTGAGAACTGGGGATTC TTCGAGCTACTGAACCACGGAATCTCCCACGACCTAA TGAACAGAGTCGAAACTGTTAACAAAGAACATTACC GCCGATTCCGCGAGCAGCGATTCAAAGAATTCGCTGC GAAAACCTTAGATTCCGGCGAAAATGTCGTCGCCGAT AATCTCGATTGGGAAAGCACCTTCTTCCTGCGCCATC TCCCAACCTCCAACATCTCACAAATCCCCGATCTGGA CGAGGATTGCCGCACCACGATGAAAGAATTTGCTCTA GAGCTCGAGAAATTGGCGGAGAGATTGCTGGATCTG TTGTGCGAGGATTTGGGGCTTGAGAAGGGGTATTTAA AAAGAGTTTTCTGCGGCGGATCGGACGGATTGCCGA CTTTTGGGACGAAGGTTGATAATTATCCGCCGTGTCC GAAGCCAGAGTTGATAAAGGGATTGAGAGCTCATAC GGATGCGGGAGGGATTATTCTGCTGTTTCAGGATGAT AAGGTCAGTGGGCCTCAGTTGCTTAAGGATGGTGAGT GGGTTGATGTTCCTCCGATGCGCCATTCCATTGTTGTT AATATCGGCGATCAGCTGGAGGTGATAACAAATGGA AGATACAAGAGTGTGATGCACAGGGTGGTGGCGCAA ACTAACGGCAACCGCATGTCGATTGCATCGTTCTACA ACCCCGGCAGCGACGCTGTCATCTTCCCGGCGCCGGA GCTGGTGGAGAAAGAAGCGGAGGAGAAGAAGGAAG TTTATCCAAAGTTTGTGTTTGAGGACTACATGAAGCT TTATGTTCGCCAGAAGTTTGAGGCTAAGGAGCCAAG GTTTGAGGCTATGAAGACTATGGATACTGTTATCAGC TCTCAGCCGATTCCTACTGCTTG

Appendix Table 6 The size of amplified *Den-Actin* fragments and the sequences of amplified clone from the sequencer.

Gene	**Product size**	**Sequence**
Actin	522 bp	ATGTTTGAGACCTTCAATGTACCTGCCATGTATGTT GCCATTCAAGCTGTTCTTTCCCTATATGCTAGTGGC CGCACGACAGGTATTGTGCTTGATTCTGGTGATGGTGTTA GCCATACAGTCCCTATTTATGAGGGTTATGCACTCCCCCAT GCCATCCTTCGATTGGATCTTGCGAGCCGAGATCTCACAG ACTCCTTGATGAAGATCCTCACTGAGAGAGGATATTCTTT CACCACTACTGCAGAGCGTGAAATTGTCAGGGACATCAAG GAGAAGCTAGCCTATGTTGCCCTTGATTATGAGCAGGAGT TGGAAACCTCCAAGAGCAGCTCTTCCATAGAAAAGAGCTA TGAACTCCCTGATGGTCAGGTTATTACTATTGGAGCTGGG AGATTTAGGTGCCCAGAAGTTCTCTTCCAGCCATCTCTGAT TGGAATGGAAGCTGCTGGAATTCACGAGACAACATACAA CTCCACCATGAAATGTGACGTGGATATCAGGAAGGATCTC TATGGAAAC

Appendix Figure 1 Epinasty, petal senescence, and colomn thickening after pollination in *Dendrobium* cv. Miss Teen flowers. A. Epinasty and petal senescence. Flowers on the right side of the inflorescence stem had been pollinated, whereas those on the left side remained unpollinated. Floral epinasty: Compare the angle between the flower stem (peduncle) and the inflorescence stem. Petal senescence: compare wilted and discoloured petals on pollinated flowers with unpollinated flowers. The picture was taken on day 10 of pollination. B. Column thickening. The column of a pollinated flower, on the right, has thickened compared to that of an unpollinated flower. Note the presence of the anther cap and the anthers on the pollinated flower. The picture was taken on day 8 of pollination.

Appendix Figure 2 Effects of pollination on labellum colour, venation, and water soaking in *Dendrobium* ‘Miss Teen’ flowers. Left: control; Right: pollinated flower.