

Table S2 Frequency of Aneuploidy in Allohexaploids over 3 Generations Based on Modal Chromosome Numbers.

Generation	Plant number	Cells analyzed	Modal chromosome		Aneuploid (%)
			numbers*		
			At	Aa	
F3	2-1	10	18	16	90
	2-5	10	18	16	90
	2-8	11	19	16	91
	5-1	10	17	16	100
	5-2	10	17	14	80
	5-3	14	19	16	64
	6-1	11	19	16	73
	6-5	11	16	16	73
	6-10	11	16	13	91
	12-3	12	17	16	75
	12-11	10	19	16	70
	12-19	11	19	16	64
	14-2	10	16	15	80
	14-4	10	20	16	100
	14-9	21	17	15	86
	19-1	10	19	15	80
	19-3	11	19	14	91
	19-5	11	19	16	82
		Average			
F6	2-8-3	1	19	16	0
	2-8-5	9	20	16	56
	5-1-1-1 5p **	26	17	16	36
	5-1-1-1 4p**	25	17	16	16
	5-1-6-1	26	16	16	77
	5-1-6-2	6	13	14	100
	5-1-6-4	13	15	16	31
	6-1-2	8	20	16	50
	6-1-6	7	20	16	100
	6-1-8	8	23	16	38
	6-1-9	4	20	16	50
	12-19-1	10	19	16	20
	12-19-9	1	20	16	0

14-4-3	2	18	16	0
14-4-4	7	17	15	71
19-1-4	7	20	16	43
19-1-9	6	19	16	17
19-1-10	7	21	16	43
Average				41

Generation	Plant number	Cells analyzed	Modal chromosome numbers		Aneuploid (%)
			At	Aa	
F7	6-1-2-1	7	18	17	57
	6-1-2-2	24	21	15	29
	6-1-2-3	26	21	16	58
	6-1-2-4	6	20	16	50
	6-1-6-2	11	20	16	18
	6-1-6-4	4	21	16	50
	6-1-8-1	38	16	16	84
	6-1-8-2	9	18	11	89
	6-1-8-3	13	21	16	85
	6-1-8-4	28	23	16	46
	6-1-9-1	28	18	14	93
	6-1-9-3	13	20	16	92
	6-1-9-4	11	19	15	82
	12-1-9-4	38	17	14	95
	12-3-5-1	9	19	16	78
	12-19-1-1	33	18	16	91
	12-19-1-2	27	17	16	81
	12-19-1-4	15	19	16	27
	12-19-1-5	11	19	15	27
	12-19-9-1	7	20	16	29
	14-3-3-1	17	16	14	88
	14-4-4-1	25	16	15	76
	19-1-9-1	35	16	14	92
	19-1-9-2	9	14	12	67
	19-1-9-3	26	16	15	77
	19-1-9-4	28	16	16	82
	19-1-9-5	20	16	16	80

19-1-9-6	20	16	12	90
19-1-9-7	17	18	15	76
19-1-9-9	15	17	16	73
19-1-10-1	40	20	16	70
19-1-10-2	16	20	16	69
Average				69

* Modal chromosome numbers were determined as the most common chromosome number for *At* and *Aa* individually for each plant.

** 4p and 5p denotes cells from different floral clusters of the same plant that either produced 5-petaled or 4-petaled flowers.