

Table S1 Frequency of Aneuploidy in Allohexaploids over 3 Generations Based on Expected Chromosome Numbers*.

Generation	Plant Number	Cells analyzed	Aneuploid cells (%)	Cells with	Cells with	At	Aa	At	Aa
				expected At chromosome number (%)	expected Aa chromosome number (%)	hyperploid** chromosomes (%)	hyperploid** chromosomes (%)	hypoploid chromosomes (%)	hypoploid chromosomes (%)
F3	2-1	10	100	0	30	20	20	80	50
	2-5	10	90	20	40	0	10	80	50
	2-8	11	100	0	27	0	27	100	45
	5-1	10	90	10	30	0	0	90	70
	5-2	10	90	10	40	10	0	80	60
	5-3	14	100	0	93	0	0	100	7
	6-1	11	91	18	45	9	18	73	36
	6-5	11	100	0	64	0	9	100	27
	6-10	11	91	27	9	0	27	73	64
	12-3	12	92	25	30	0	17	75	50
	12-11	10	90	20	50	0	10	80	40
	12-19	11	91	9	55	0	0	91	45
	14-2	10	100	0	10	0	10	100	80
	14-4	10	100	30	40	10	30	60	30
	14-9	21	95	10	24	5	0	86	76
	19-1	10	100	0	30	0	0	100	70
	19-3	11	100	0	18	0	0	100	82
	19-5	11	100	18	18	18	9	64	73
	Average			96	11	36	4	10	85

Generation	Plant Number	Cells analyzed	Aneuploid cells (%)	Cells with expected At chromosome number (%)	Cells with expected Aa chromosome number (%)	At hyperploid** chromosomes (%)	Aa hyperploid** chromosomes (%)	At hypoploid chromosomes (%)	Aa hypoploid chromosomes (%)	
F6	2-8-3	1	100	0	100	0	0	100	100	
	2-8-5	9	44	78	78	0	0	33	22	
	5-1-1-1 5	25	96	25	72	0	0	96	68	
	5-1-1-1 4	25	100	25	88	0	0	96	12	
	5-1-6-1	26	100	26	35	0	0	65	58	
	5-1-6-2	6	100	6	33	0	0	100	50	
	5-1-6-4	13	100	13	77	0	8	100	15	
	6-1-2	8	50	63	75	13	13	25	13	
	6-1-6	7	71	29	71	0	0	71	43	
	6-1-8	7	100	0	86	100	0	0	14	
	6-1-9	4	50	50	100	50	0	0	0	
	12-19-1	10	100	0	100	0	0	20	0	
	12-19-9	1	0	100	100	0	0	0	0	
	14-4-3	2	100	0	100	0	0	100	0	
	14-4-4	7	100	0	0	0	0	100	100	
	19-1-4	7	14	86	100	0	0	14	0	
	19-1-9	6	100	0	100	0	0	100	0	
	19-1-10	7	86	14	100	71	0	14	0	
	Average			78	29	79	13	1	58	27

Generation	Plant Number	Cells analyzed	Aneuploid cells (%)	Cells with expected At chromosome number (%)	Cells with expected Aa chromosome number (%)	At hyperploid** chromosomes (%)	Aa hyperploid** chromosomes (%)	At hypoploid chromosomes (%)	Aa hypoploid chromosomes (%)
F7	6-1-2-1	7	100	7	14	0	86	100	0
	6-1-2-2	24	100	13	4	88	0	0	96
	6-1-2-3	26	100	0	81	100	8	0	12
	6-1-2-4	6	50	50	83	0	0	50	17
	6-1-6-2	11	18	82	100	0	0	18	0
	6-1-6-4	4	100	0	75	75	0	25	25
	6-1-8-1	38	89	38	50	3	0	74	50
	6-1-8-2	9	100	11	11	11	11	78	78
	6-1-8-3	13	92	15	46	62	0	23	54
	6-1-8-4	28	93	7	68	71	0	18	32
	6-1-9-1	28	96	7	18	0	0	93	89
	6-1-9-3	13	92	31	38	15	8	54	54
	6-1-9-4	11	100	0	55	0	0	100	73
	12-1-9-4	38	95	8	16	0	0	92	84
	12-3-5-1	9	89	9	45	0	0	89	44
	12-19-1-1	33	82	24	33	3	6	73	61

Generation	Plant Number	Cells analyzed	Aneuploid cells (%)	Cells with expected At chromosome number (%)	Cells with expected Aa chromosome number (%)	Cells with At hyperploid** chromosomes (%)	Cells with Aa hyperploid** chromosomes (%)	Cells with At hypoploid chromosomes (%)	Cells with Aa hypoploid chromosomes (%)
F7	12-19-1-2	27	89	26	63	0	4	74	33
	12-19-1-4	15	93	7	87	0	0	93	87
	12-19-1-5	11	100	0	9	0	0	100	91
	12-19-9-1	7	29	86	86	14	0	0	14
	14-3-3-1	17	100	17	12	0	6	94	82
	14-4-4-1	25	100	25	4	0	0	100	96
	19-1-9-1	35	100	35	11	0	6	100	83
	19-1-9-2	9	100	9	22	0	0	100	78
	19-1-9-3	26	100	27	22	0	4	96	70
	19-1-9-4	28	82	18	43	0	0	79	57
	19-1-9-5	20	100	20	30	0	0	100	70
	19-1-9-6	20	100	20	10	0	5	100	85
	19-1-9-7	17	100	17	6	0	6	76	88
	19-1-9-9	15	100	15	33	0	0	93	67
	19-1-10-1	40	70	40	60	40	5	15	35
	19-1-10-2	16	62	16	50	0	0	63	50
	Average			89	24	34	3	2	80

* Expected chromosome number is: At - 20; Aa - 16

** Hyperploid chromosomes are those that exceed the expected number and hypoploid chromosomes are those that are fewer than the expected number