

Table 2. The $\frac{\text{mutant}}{\text{normal}}$ values for chlorophyll, carotene and xanthophyll.

Mutant or cross	Temp. in °C.	% $\frac{\text{mutant}}{\text{normal}}$	% $\frac{\text{mutant}}{\text{normal}}$	% $\frac{\text{mutant}}{\text{normal}}$	% $\frac{\text{mutant}}{\text{normal}}$
		Chlorophyll	Carotene	Xanthophyll	Total carotenoid
Pastel 8549	22°	68.1	91.9	34.3	59.1
	37°	13.9	66.7	22.6	47.1
Pastel 4889	22°	19.5	17.2	50.9	32.1
	37°	43.9	51.7	31.6	42.6
vp9/Pastel 4889	22°	7.9	10.1	15.3	12.9
	37°	16.7	13.9	54.5	28.0
Pastel 8686	22°	11.1	7.8	44.9	22.0
	37°	59.6	61.4	164.9	93.7
w3/Pastel 8686	22°	2.8	2.3	12.8	6.6
	37°	22.8	14.1	45.7	27.6

In these three mutants the concentrations of all three of the chloroplast pigments have been affected. The pigment levels of pastel more closely approximate those of normals when grown at 22°C than ⁸⁵⁴⁹ at 37°C. This is in agreement with previous experiments with this mutant grown at 115 foot candles (Robertson and Anderson, Temperature sensitive alleles of the y_1 locus in maize. Jour. of Hered. 52:53-60. 1961). Pastel⁸⁶⁸⁶ and pastel⁴⁸⁸⁹ behave in an opposite manner with more normal appearing phenotypes observed at high temperature than low temperatures. Of the latter two mutants, pastel⁸⁶⁸⁶ more closely approximates normality than does pastel⁴⁸⁸⁹.

In comparing the results of each homozygous pastel with those of the F_1 between that pastel and the appropriate albino, it can be seen that neither the albino or pastel alleles of the two loci show complete dominance with respect to the other under these experimental conditions.

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1. Defective endosperm factors in maize teosinte derivatives*.

Other allelism tests have been carried out among stocks possessing de^t factors. Allelism has been confirmed for de^{t3} and de^{t5} , and established for the latter and de^{t16} .

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