

pollination. In the other stock, which is a late one, the differential germination of the two pollen types appears to show better several hours later.

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2. Reversion frequency of alleles of the gl_1 locus and of some of their compounds.

As reported in the previous MNL a quite large proportion of the glossy types detected in the Italian open pollinated varieties turned out to be mutants of the locus gl_1 . This has provided the opportunity for analysing their nature by studying the reversion frequency of some of these mutants in comparison with some of their compounds. The data so far collected, for the self-pollinated mutants, are presented in the following table:

Identification No. of the gl_1 Mutant	Total No. of - Seedlings	No. of gl_1 Seedlings	Frequency of gl_1 Seedlings $\times 10^{-4}$	Fiducial Limits ($P = .05$) $\times 10^{-4}$
'63- 302	7538	1	1.33	0.03 - 7.39
'63- 305	1522	0	0.00	0.00 - 24.24
'63- 307	20931	1	0.48	0.01 - 2.66
'63- 324	14332	29	20.23	19.35 - 21.11
'63- 329	1692	0	0.00	0.00 - 21.81
'63- 334	4782	0	0.00	0.00 - 7.72
'63- 359	6223	0	0.00	0.00 - 5.93
'63- 350	5209	0	0.00	0.00 - 7.08
'63- 347	1295	0	0.00	0.00 - 28.5
'63- 796	41601	0	0.00	0.00 - 0.89
'62- 824	17927	0	0.00	0.00 - 2.06
'63- 51 } '63- 495 }	12375	2	1.62	0.02 - 4.5

The compound types which have been studied have yielded the following data:

Compound Type	Total No. of Seedlings	No. of <u>G1</u> Seedlings	Frequency of <u>G1</u> Seedlings $\times 10^{-4}$	Fiducial Limits (P=.05) $\times 10^{-4}$
'63- 302/307	120,850	28.5*	2.36	1.49 - 3.22
'63- 302/350	58,316	36	6.7	5.49 - 7.2
'63- 302/51}	47,686	15	3.55	2.93 - 4.19
'63- 302/59}				
'63- 324/325	32,714	24	7.34	4.77 - 10.27
'63- 329/334	30,411	5	1.64	0.53 - 3.84
'63- 331/335	14,191	22	15.5	13.17 - 18.82
'63- 331/334	6,757	4	5.92	1.61 - 15.15
'63- 345/347	8,431	6	7.11	2.61 - 15.49
'63- 348/350	45,131	1	0.22	0.0056 - 1.23
'63- 351/359	12,144	6	4.94	1.81 - 10.75
'63- 359/51}	50,056	58	11.58	10.31 - 13.1
'63- 359/59}				
'63- 5002/495	25,617	18	7.026	5.56 - 8.68
'63- 797/495}	92,326	96	10.4	9.51 - 11.46
'63- 796/495}				
'62- 824/601	54,945	6	1.9	0.4 - 2.38
'62- 815/601	35,515	2	0.56	0.068 - 2.033
'61- 173/122	68,632	20	2.91	2.34 - 3.56
'61- 175/122	50,360	11	2.18	1.65 - 2.84

* In this compound 5 seedlings, each one partially normal and partially glossy, have been found. Each of these seedlings has been rated .5.

A higher frequency of reversion is obvious in most of the compounds, although, at this stage of the study, it is impossible to decide whether this is due to intracistron recombination (as appears likely) among different mutational sites, or to higher mutation rate s.s. promoted by mutator systems, as controlling elements, brought together in the hybrids.

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