

A second ij-type and a virescent mutant show linkage with chromosome 4 markers:

	X Y	X y	x Y	x y	c.o. \pm	st. err.
<u>ij-gl</u>	3367	1471	1369	10	9.2 \pm	0.8
<u>ij-su</u>	4704	1384	1543	125	32.4 \pm	0.7
<u>v-gl</u>	1501	603	598	11	14.8 \pm	1.2
<u>v-su</u>	2213	774	649	111	40.0 \pm	0.8

In the 1965 MNL a case was described in which self-fertilization of plants $y_1 \underline{Ij/Y_1 ij}$ did not yield any double recessives. Further data are reported from selfed progenies studied recently, in comparison with 1965 data:

	<u>Y Ij</u>	<u>Y ij</u>	<u>y Ij</u>	<u>y ij</u>
1965	11365	5802	5735	0
1966	17550	8732	8645	8
Total	28915	14534	14380	8

(c.o. 2.35% \pm 0.28 st. err.)

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7. Ethyl-methane-sulphonate (EMS) treatment on maize seeds.

Seeds of the single cross A 157 T x W 153 R have been treated with EMS for 12 hours, at 20°C., at a volume concentration of 1.5%. From the analysis of M_2 segregations the efficiency of the mutagenic activity of the chemical has been confirmed, as shown in the following table:

Segregations	Semisterile M_2 ears		Normal M_2 ears		Control ears	
	No. progenies	No. ears	No. progenies	No. ears	No. progenies	No. ears
Endosperm mutants	35	50	77	112	6	7
Chlorophyll mutants	10	16	32	60	4	8
Other seedling traits	15	23	31	42	0	0
Cases examined	30	140	74	282	74	322

Among the induced endosperm mutants more than half were defectives, several were gm, and a few were sh, su, and wx types. The seedling mutants were mainly abnormal growth and chlorophyll types. From the table reported it also appears that the progenies possessing obvious chromosome aberrations (as indicated by the semisterility of the ears) did not contain more "point-mutations" than normally filled ears.

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8. Genetical and cytological data on Morocco maize.

Twenty-six samples of Morocco varieties have been studied genetically and cytologically. About six self-pollinations have been made for each sample. In the following table are listed the mutants found, together with the number of the independently occurring cases (when a phenotypically identical mutant was segregating in a given sample, the mutant was listed once):

Endosperm traits		Mutants	
Type	No. of cases	Type	No. of cases
Colored	1	Abnormal growth	5
Defective endosperm	8	Adherent	2
Etched	1	Allium type	1
Germless	1	Dwarf	4
Opaque endosperm	1	Fine stripe	1
Vivipary	1	Glossy	5
White endosperm	5	Green mottled	1
		Iojap	1
		Luteus	1
		Narrow leaf	5
		Pale green	3
		Pale yellow	1
		Rootless	4
		Virescent	1
		Yellow green	4
		White	

For eleven of the samples, cytological study was also carried out, as reported in the following table (when knob shape, size and condition are not specified, the knob is round, medium sized and in homozygous condition):