The rate of callus growth, but not its induction, appears to be strain dependent. Single cross hybrids grow faster than inbreds, and some inbreds do better than others. One inbred which has performed well in our hands is A632. Callus has also been induced in putative androgenic haploid seed obtained from Dr. J. L. Kermicle. These are particularly slow growing.

Corn callus from other than endosperm origin has also been reported by others (cited in Masteller and Holden, Pl. Phys. 45: 362, 1970). Dr. Ed Green is also conducting extensive studies on maize tissue in culture at the University of Minnesota.

Ben Burr
Oliver Nelson

7. A recently isolated mutant with an opaque phenotype.

The designation, opaque-6, is assigned to a recently isolated mutant with an opaque phenotype inherited as a Mendelian recessive. The mutant, which has good expressivity, is not allelic to opaque-1, opaque-2, opaque-4, opaque-5, or horny. The homozygous mutant plants die when about 2" tall. The only plants from mutant seeds surviving to maturity are heterozygotes resulting from heterofertilization. When compared to normal maize, there is no change in the amino acid profile of the collective endosperm proteins. The mutation was detected in a popcorn line by R. B. Ashman (his number, ASX 566).

It is my understanding that the mutant (floury-10) reported by McWhirter (MNL 45:184) last year will now be designated opaque-7.

Oliver Nelson

8. The location of lo_2.

The lethal ovule mutant, lo_x, reported in MNL 43: 145 as being 6 map units from wx on chromosome 9, is located distal to wx. The data leading to this conclusion are derived from the following cross:

$$\frac{c\ sh\ +\ wx\ gl_{15}}{C\ Sh\ lo\ Wx\ Gl_{15}} \times \frac{c\ sh\ +\ wx\ gl_{15}}{c\ sh\ +\ wx\ gl_{15}}.$$

Table 1. The progeny derived from the cross c sh + wx gl$_{15}$/C Sh lo Wx Gl X c sh + wx gl/c sh + wx gl.

Plant No.	C Sh Wx		c sh wx		C sh wx		c Sh Wx		C Sh wx		c sh Wx		C sh Wx		c Sh wx		Σ
	Gl	gl	Gl	gl	Gl	gl	Gl	gl	Gl	gl	Gl	gl	Gl	gl	Gl	gl	
44123-1	0		157		7		1		25		6		0		0		196
43075	-	-	2	132	0	6	1	0	1	19	3	1	-	-	-	-	
44123-2	6		168		14		0		18		14		1		0		221
43075	4	0	7	117	0	12	-	-	0	16	8	3	1	0	-	-	
44123-3	0		155		4		0		33		10		0		0		202
43075	-	-	11	91	0	3	-	-	0	28	4	-	-	-	-	-	
Total	6		480		25		1		76		30		1		0		619
	4	0	21	340	0	21	1	0	1	63	15	4	1	0	0	0	

Three ears were scored, and the data are given in Table 1.

On the assumption that no $\underline{lo}_x$ megaspores are functional, the percentage of recombination between Wx and $\underline{lo}_x$ is 6.1. This agrees with the previous estimate of 6 percent recombination (MNL 43). The percentage of recombination between Sh and $\underline{lo}_x$ is 13.4.

The mutants at this locus are being designated as lethal ovule-2 ($\underline{lo}_2$).

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ADDENDUM:

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1. A note on field classification of plants for pollen sterility.

I have been puzzled by reports of difficulties in classification of pollen for sterility found in heterozygotes for chromosomal interchanges in maize. Recently, when I was told about the difficulty, I found that the slide was prepared for examination with the pocket microscope by shaking pollen from a tassel on to the slide. This probably would give inconsistent readings, since varying proportions of old, shriveled pollen would be included with the newly shed pollen. Use of a fresh, nondehisced anther solves this problem.

The small pocket microscope with 40X magnification, formerly made by Leitz, is excellent, but is no longer manufactured. One similar in size (cylindrical in shape, 2.8 cm in diameter x 5 cm) and similar in operational features with slightly lower magnification was available two years ago from: Nippon Microscope Works, Ltd.,
No. 4-16, 2-chome Minami Aoyama,
Minato-Ku, Tokyo, Japan
A minimum of 12 may have to be ordered, but the cost is low. Enlarging the opening in the base with a metal reamer increases the amount of light that enters and improves its performance. This microscope is small enough to carry in one hand, holding the small glass slide between the second and third fingers of the same hand. This leaves both hands free