

5. Liquid retention on the surface of the glossy mutant.

As is known, when sprinkled with water, normal seedlings shed it almost completely, while glossy mutants retain drops on the surface of the leaves. A quantitative demonstration of such a differential behaviour has been obtained by weighing the first leaves of $G1$, gl^H , gl_1 , gl_2 and gl_3 types before and after sinking them in water; the weight difference has been related to the calculated leaf surface. As shown in Table 1, gl_1 , gl_2 and gl_3 are expressed throughout all the leaves while gl^H differentiates from the 4th leaf onward.

Since the practice of providing the plants with nutrient elements through the leaves is now spreading, and because insecticide treatments to the plants are likely to be more efficient as long as the active solutions adhere to the leaf surface, the above mentioned types have been sprinkled with the following solutions:

1% Foliar K (chemical mixture containing N_2 14%, P_2O_5 13%, K_2O 20%, minor elements, phytohormones, tension-active, especially suited for leaf nutrition);

3% Cytosol PB 50 (DDT 50%) plus Irol (adhesive liquid);

5% Foliar (chemical mixture containing N_2 15%, P_2O_5 15%, K_2O_5 16%, minor elements, phytohormones, tension-active, especially suited for leaf nutrition).

It is apparent from Table X that the solutions provided with tension-active chemicals, especially suited for the normal type, greatly reduce or eliminate completely the difference between the $G1$ and gl phenotypes. Although more extensive data are needed, it seems that, with the solutions used, there is no special advantage in substituting the $G1$ factor with gl in the inbred lines and eventually in their hybrids in order to improve their properties for some field practices.

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Table X. Liquid retention on the leaf surface of normal and gl mutants (average values expressed as mg of the specified liquid per cm^2).

Genotype	Leaf No.					
	1	2	3	4	5	6
Distilled water						
$G1$	6.7	5.1	4.0	1.8	1.2	5.0
gl^H	4.8	5.5	5.4	5.0	4.4	13.7
gl_1	9.1	9.2	8.0	5.5	4.8	15.7
gl_2	15.2	10.2	8.6	8.3	7.3	7.9
gl_3	12.2	12.1	8.0	9.7	6.6	5.8
Foliar K, 1%						
$G1$	10.8	10.1	8.5	9.3	12.2	
gl^H	9.4	4.2	10.5	3.1	8.3	
gl_1	20.5	11.6	8.8	7.4	12.4	
gl_2	9.5	8.5	6.9	9.2	10.4	
gl_3	4.9	6.9	5.8	3.8	6.1	