

UNIVERSITY OF MISSOURI
and
U. S. DEPARTMENT OF AGRICULTURE
Columbia, Missouri

1. Subject index -- a clarification.

Several cooperators have requested index references to specific subjects in volumes 4-30, as was hoped. However, because the note in volume 33 was not worded clearly and was misunderstood by some, please accept my apologies and the following: I will be happy to send references on a reasonable number of specific topics (you name them) to any cooperator wishing them. The index presently consists of about 3,000 file cards and is still somewhat disorganized, else it would be put in final form and be re-produced immediately, for full distribution. We have found the index particularly helpful in locating scattered linkage notes (by chromosome) and similar items. An index by gene symbols for linkage, description, interaction, action, distribution, structure, mutation and mutability is also in preparation and presently covers through volume 27.

-- E. H. Coe, Jr.

2. Normal segregation of markers flanking B¹/B.

From heterozygotes of B¹/B (weak/intense color), only B¹ individuals are obtained, while B¹/b (weak/green) yields both B¹ ("converter") and b gametes, as previously reported. The critical test against elimination from transmission of B by B¹, using flanking markers, has been conducted. Comparisons were made between + B¹ + and + B + (of the same background) over gl B sk, selfed and backcrossed to gl B sk. The progenies were graded for color (0 for glume bar color only; other grades have increasing husk color) and classified for the markers. Selfs gave the following:

Markers	+ +					gl sk					+ sk					gl +					Sum				
Grade	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	
B ¹ test	34	4	1				2	5	1				1	4					8	1					61
B check		1	5	11	8	4				1	4	1					2	2				4	0	2	45

The backcrosses to gl B sk gave the following:

Markers	+ +					gl sk					+ sk					gl +					Sum					
Grade	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5	0	1	2	3	4	5		
B ¹ test	4	21	1				3	17	1				0	9	2				2	6					66	
B check				11	21	4				11	14	1					3	4	1				4	2	0	76

Although B (of the gl sk class) and B¹ (of the + + class) do not "segregate" in the normal sense, markers on either side recombine, segregate, and are transmitted normally. It will be noted that some overlapping for grade occurred in the selfs; since grade 2 is much lighter than grade 3 (other grades are less widely separated), these overlaps are assumed to be due to the origin of new B¹ cases in the B check.

-- E. H. Coe, Jr.