MONOSOMIC ANALYSIS OF RED SEED COLOR IN WHEAT¹

R. E. Allan and O. A. Vogel²

EARLY work by Nilsson-Ehle (3) established that red vs. white seed in wheat (Triticum aestivum L.) is conditioned by alleles at three different loci, with red being dominant. Using nullisomic analyses with the variety 'Chinese Spring,' Sears (4) located 1 of the 3 loci for seed color on chromosome 3D. In this study we present preliminary evidence as to the location of a second locus for red seed color carried by selection 'Norin 10-Brevor 14,' C.I. 13253.

Seed stocks were developed for the study between Norin 10-Brevor 14 and the Chinese Spring monosomic series. During the spring of 1963, F₁ plants were derived from F₁ monosomic plants of each chromosome and F₂ plants from normal disomic plants were grown in the field at Pullman, Wash. After harvest, all populations were classified for seed color. The cytological method used to determine monosomic plants has been reported previously (1).

The results appear in Table 1. Previous crosses involving Norin 10-Brevor 14 and varieties with white seed suggested that Norin 10

² Geneticist and Agronomist, Crops Research Division, ARS, USDA, Pullman, Wash.