PLANT breeders desiring to undertake quality studies early in the development of new varieties are handicapped by having but small quantities of seed available. Such quality studies are particularly necessary to the originator of new wheats. Orthodox methods for testing such wheats require several pounds of seed if regular milling and baking studies are to be undertaken. Tests for evaluating the quality of new wheats before these several pounds of seed become available have long been needed. Great interest was aroused, therefore, when Pelshenke (15) and Cutler and Worzella (8) published details of their methods for testing wheat quality using small amounts of whole wheat meal.

Since their original paper, Cutler (7) and Cutler and Worzella (9) have published further results obtained through the use of their test. Based upon these results, they (9) suggest a classification of wheats based upon the "time" as an index of quality. Wilson, Markley, and Bailey (20) found no significant correlation between the time test and protein content or loaf type when working with hard spring and hard winter wheats. They experienced considerable trouble in determining the end point of the test. Wilson and Markley (21) found a positive correlation with spring wheats ground on a Wiley mill between time of dough ball disintegration and loaf volume and baking strength score. They conclude that the test has possibilities.

Markley (13), in discussing the usefulness of the test, states (referring to Minnesota wheats), "You can tell extremes, but you cannot differentiate in the median group at all." Working with Michigan-grown soft wheats, Winter and Gustafson (22) found a fair positive correlation between the time test and loaf volume, and with expansion of dough, but not with protein content of flour. They used a modified method for determining "time," although their procedure was essentially the same as that outlined by Cutler and Worzella (8). Winter

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3 Figures in parenthesis refer to "Literature Cited," p. 249.