**Abstract**

The dough characteristics of fifty popular Indian hexaploid wheat varieties were assessed by testing various rheological properties using a Brabender Farinograph and an Extensograph. These studies were aimed at evaluating the flour quality and functionality of the wheat dough. Based on the rheological dough properties of 50 Indian hexaploid wheat varieties it was recommended that 13 wheats could be useful for blending purposes, 31 varieties could be used for both bread and chapatti making, and the remaining 6 wheats were found suitable for biscuit making. The outcome of the experiments will be useful for plant breeders, millers and bakers.