



Tulu research centre. The seven bread wheat varieties from rain fed wheat research program and three bread wheat varieties released from irrigated wheat program were planted in randomized complete block design with two replications on 5mx5m plot area.

Chemical fertilizers 100 Kg/ha (46%N) in UREA form and 50kg/ha P<sub>2</sub>O<sub>5</sub>/NPS (19-38-7) (Tagesse et al., 2018) was applied based on previous practice in the irrigable areas [8]. N application was on split basis; 1/2 at 25 days after planting and 1/2 at flower initiation and DAP/NPS applied all at planting. Aphid was controlled by using chemicals (karate) in 2018/19. We considered the rust disease interaction with varieties and did scoring with irrigated wheat protection team. Other management practices performed as per previous recommendations. All experimental plots irrigated uniformly in 10days interval until the wheat crop reached physiological maturity. Data were recorded for Days to 50 % heading , Days to 75% Maturity, Spike length, spikelet number per spike, Plant height (cm), Number of kernel per spike, Thousand kernel weight (g) and Grain yield (kg ha<sup>-1</sup>).

### Statistical Analysis of Data

The recorded all yield components and average yield across locations and over years data were subjected to analysis of variance (ANOVA) and AMMY analysis of ranking using appropriate software GenStat

statistical package 18th Edition (VSN International 2015). Comparison of varieties means was done using Fischer's least significant difference (LSD) test at 5% probability levels. The combined analysis of variance was carried out to estimate effects of environment (E), varieties (V) and VxE interaction [9].

## Results

### Analysis of Variance

Analysis of variances of 10 released bread and didnce



### **AMMY analysis of ranking**

The AMMY analysis of ranking revealed the varieties performance across different locations. Based on the varieties yield potential ammy identified the four better out yielded varieties and ranked them. The AMMI analysis was designed to address "which ó won-where" pattern (Yan et.al.,