



Water deficit reduced total dry matter, yield, crop growth rate (CGR), stem growth rate (SGR), leaf growth rate (LGR), pod growth rate (PGR), grain growth rate (GGR), leaf area index (LAI) and leaf area duration (LAD) of all cultivars. However, specific leaf weight (SLW) increased with the increased level of drought stress. Drought resistance was associated with duration of crop. Kamphaeng Saen 2 and U-Thong 1 (medium maturity) had higher yield and resisted greater water stress than in the short (Chai Nat 60) and long duration cultivar (Local) due to higher Crop Growth Rate, higher root density and extracted greater amount of water from deeper soil profile.

Lack of water in the driest regime reduced the seed yield of Local, Chai Nat 60, Kamphaeng Saen 2 and U-Thong 1 cultivars by an average of 56, 54, 53 and 51%, respectively. Among yield components, pod number was most sensitive to drought followed by seeds per pod. Kamphaeng Saen 2 and U-Thong 1 (medium maturity) cultivars performed best in irrigated as well as in rainfed conditions. While Chai Nat 60, can be used as an early maturity cultivar for drought escape.