

Growth and yield response to water availability at different growth stages of rice.

Abstract

Water supply is the most important factor which influences growth and yield of rice. An experiment was conducted at rain shelterhouse, Universiti Putra Malaysia to evaluate the effect of water stress at different growth stages on Malaysian commercial rice variety MR220. Treatments used in this study were: 1. flooding, 2. field capacity, 3. field capacity at panicle initiation stage, 4. field capacity at active tillering stage and 5. field capacity at first flowering stage. Number of tillers, panicles, spikelets, filled grains, length of panicles and yield were significantly reduced under filled capacity condition. Field capacity at active tillering stage also reduced number of tillers and panicles per plant, spikelets per plant, filled grains percentage, panicle length, and yield thus indicating that MR220 is sensitive to water stress especially at active tillering stage.

Keyword: *Oryza sativa*; Field capacity; Water stress; Anthesis tillering stages; Growth and yield.