

ABSTRACT

Paddy plants (*Oryza sativa* L.) are staple foods and basic needs of the Indonesian people, so that rice is a very important and needed food crop after wheat and corn. The purpose of this study was to determine the tolerance test of several types of local Aceh rice (*Oryza sativa* L.) in different shades. This study used a split plot design (SPD) method with two treatment factors, namely rice (P) and shade (N). The first factor as the main plot is shade, N0 (Without Shade) and N1 (Shade). The second factor is the type of rice, P1 (US-20 Line), P2 (CBD-08), P3 (CBD-04), P4 (Sigupai), P5 (Cibatu-06) and P6 (Inpago-09). Thus there are 12 treatment combinations with 3 replications so that there are $12 \times 3 = 36$ experimental units. Then each plot consists of 6 research plants, so that it becomes $36 \times 6 = 216$ total plants. The results showed that the use of several types of rice affected the variables of leaf area, flowering age, plant stalk weight, dry stalk weight of plants, number of stomata, number of grains per panicle and number of grains per hill. The best type of rice was P6 (Inpago-09), the use of different shades affected the variables of leaf area, net assimilation rate (LAB), relative growth rate (LTR), flowering age, leaf chlorophyll content, plant stalk weight, dry stalk weight of plants, root length, number of stomata, number of grains per panicle, percentage of filled grains, percentage of empty grains and *shoot-root-ratio*, and there was an interaction between several types of rice and different shades on the variable of number of grains per hill. The best interaction was found in the combination of P6 (Inpago-09) + N0 (No Shade) rice treatments.

Keywords: Plants, Light intensity and Treatment