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Shading Effect on Rice Growth Characters

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[Abstract]

For abnormal weather disaster and building constructions, the shading stress could occur in crops more often. Those shading stress can effect on rice growth characters. Therefore, we investigated the shading effect on rice growth characters. Shading treatments were treated using shading screen as 35, 55, 75 and 100%. To check the shading effect on rooting after transplanting, shading stress treated after transplanting for 20 days as 35, 55 and 75%, And 35, 55, 75 and 100% of shading were treated 60 days after transplanting to check the growth characters. After transplanting, the shading stress effected on leaf and root growth. At 19 days after transplanting, leaf number reduced by shading stress. In 35, 55 and 75% shading stress, the leaf number reduced as 0.38, 0.45 and 0.9 respectively compared to control treatment. And root length was also reduced as 0.39, 0.6 and 1.93 cm respectively compared to control treatment. The plant height was slightly increased in 35 and 55% and reduced in 100%. Leaf growth speed per day was reduced as 0.0167 according to shading stress. And root growth speed also reduced as 0.0426 according to shading stress. The shading stress during vegetative stage effected on plant height and tiller number. In 35, 55 and 75% of shading stress, the plant height was slightly increased but it was reduced in 100%. Tiller number was significantly reduced by shading stress. According to 10% of shading stress, about 7% of the tiller number was reduced. However, leaf color did not change by the shading stress. The leaf area in 2nd to 4nd leaf from new leaf reduced as 297 and 1044 in 75 and 100% of shading stress and increased as 70 and 99 in 35 and 55%. These leaf area change was affected by both the length and width of the leaf.

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