

ABSTRACT

A research aims to know the influence Irrigation of SRI and conventional methods the physiology, growth and results in some rice varieties. This research has been done in an experimental farm Faculty of Agriculture University of Muhammadiyah in Yogyakarta from July to November 2016.

This research, conducted in polybag with Completely Randomized Design (CRD) and 5 x 2 Factorial Design. The first factor was varieties (V) consists of 5 levels i.e. IR 64, Mekongga, Ciherang, Inpari Sidenuk, HIPA 18 and the second factor was irrigation factor (A) consists of 2 levels, i.e. SRI and conventional methods with three replications. Each of experimental unit consists of 6 plants, 3 samples plant for observation of plant height, the number of stem, productive tiller, fresh weight, dry weight, root length, panicle length, grain weight, unfilled grain percentage, grain 1000 weight, 2 plants to observation leaf area, root length, fresh weight and dry weight, 1 plants to backup. Total plants in this research were 180 plants.

The results of this research showed that treatment of varieties effect significantly on physiology, growth, and yield of rice. On physiology looks at the Harvest Index parameters of IR 64 was the highest. On growth parameters was height plants, fresh weight, dry weight, root length, panicle length, and on the results of paddy can be seen from the weight of grain i.e. varieties Ciherang, HIPA 18 and Mekongga have weigher than Inpari Sidenuk varieties. Irrigation was done shows the influence of fresh weight and roots length of rice, while on the physiology and yield of rice has not significantly different. There was showed that SRI irrigation treatment effect higher of fresh weight and root length than conventional irrigation. The number of productive tiller on the growth in 12 weeks was significantly interactions between varieties and irrigation treatment. There was showed SRI irrigation treatment with IR 64 varieties effect more higher than varieties Mekongga and Inpari Sidenuk with SRI irrigation, and Inpari Sidenuk varieties with conventional irrigation.

Keywords: SRI, Physiology, Varieties and Intermittent irrigation.