

ABSTRACT

APPLICATION OF DEFICIT IRRIGATION IN UPLAND RICE PLANTS (*Oryza sativa* L.) INPAGO VARIEIES 9

By

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The aim of this research was to determine the deficit irrigation applications on the growth, yield and crop water productivity of upland rice (*Oryza sativa* L.) variety of inpago 9.

This research was conducted in a plastic house, at the integrated field laboratory at the University of Lampung from November 2016 to March 2017. This research used a completely randomized design (CRD) with 4 levels of soil water content, namely ID₁ ((0-20)-100)% AW, ID₂ ((0-20)-80)% AW, ID₃ ((0-20)-60)% AW, ID₄ ((0-20)-40)% AW, with five replicates.

The result showed that deficit irrigation applications on upland rice (*Oryza sativa* L.) variety of inpago 9 had an effect on the growth of plant height, number of leaves, number of new shoots, number of panicle, the dry weight of biomass, weight of root, and empty grain. But it did not affect the production and water productivity. The factor of yield response to water (Ky) was more than 1, meaning that upland rice plant variety of inpago 9 was sensitive to deficit

irrigation. The highest water productivity of rice plant of inpage 9 vatiety was ID₁ with average productivity of 0,758 gram/liter, followed by ID₄, ID₃, ID₂ respectively 0,756 gram/liter, 0,663 gram/liter, 0,575 gram/liter.

Keyword: deficit irrigation, growth phase, upland rice, and crop water productivity

ABSTRAK

APLIKASI IRIGASI DEFISIT PADA PADI GOGO (*Oryza sativa L.*) VARIETAS INPAGO 9

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Penelitian ini bertujuan untuk mengetahui pengaruh aplikasi irigasi defisit terhadap pertumbuhan, hasil dan produktivitas air tanaman pada padi gogo (*Oryza sativa L.*) varietas Inpago 9.

Penelitian ini dilaksanakan di dalam rumah plastik, laboratorium lapang terpadu, Universitas Lampung pada bulan November 2016 sampai dengan Maret 2017.

Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan empat taraf perlakuan, yaitu perlakuan ID₁ ((0-20)-100)% AW, ID₂ ((0-20)-80)% AW, ID₃ ((0-20)-60)% AW, ID₄ ((0-20)-40)% AW, dengan lima ulangan.

Hasil penelitian menunjukkan bahwa, perlakuan irigasi defisit pada padi gogo (*Oryza sativa L.*) varietas inpago 9 berpengaruh terhadap pertumbuhan tinggi tanaman, jumlah daun, jumlah anakan, jumlah malai, berat kering brangkasan atas, berat brangkasan bawah basah dan kering, dan gabah hampa. Namun tidak berpengaruh terhadap produksi dan produktivitas air. Faktor tanggapan hasil terhadap air (Ky) menunjukkan nilai > 1 , artinya tanaman padi gogo varietas

Inpago 9 sensitif terhadap irigasi defisit. Produktivitas air tanaman padi Inpago 9 rata-rata paling tinggi adalah ID₁ dengan produktivitas 0,758 gram/liter, diikuti oleh ID₄, ID₃ dan ID₂, masing-masing 0,756 gram/liter, 0,663 gram/liter, 0,575 gram/liter.

Kata Kunci : irigasi defisit, fase tumbuh, padi gogo, dan produktivitas air tanaman.