

## **ABSTRACT**

### **APPLICATIONS OF DEFICIT IRRIGATION ON VEGETATIFE PHASE OF UPLAND RICE (*Oryza sativa L.*) INPAGO 9 VARIETY**

**By**

**NYOMAN NOVYANTA**

Rice is one of the staple food for Indonesian people. The average per capita consumption of Indonesian people reaches 1,631 kg per week. Rice productivity in wetland (5,293 Ton/Ha) is higger than dryland (3,113 Ton/Ha). The main problem in the cultivation of upland rice in dryland which is still difficult to be handled is water limitted. One effort that can be made to overcome this problem is to utilize deficit irrigation technology.

This research is intended to find out the effect of deficit irrigation application during the vegetatife phase of gogo rice varietiy inpago 9. This research was conducted in plastic house of integrated field laboratory of University of Lampung on November 2016 until March 2017. This research used completly randomized design (CRD) with a single treatment factor (deficit irrigation), treatment consist of 4 levels, namely ID<sub>1</sub>(20-100)% Available Soil Mosture (ASM), ID<sub>2</sub>(20-80)% ASM, ID<sub>3</sub>(20-60)% ASM, ID<sub>4</sub>(20-40)% ASM, with 5 replications.

The results show, the application of irrigation deficit on vegetative phase was effected to the growth of plant height, number of leaves, number of tillers, number of panicle, crop water requirement. The highest stover rice weight achieved by the treatment of ID<sub>4</sub>(20-40)% ASM. The highest rice production with ID<sub>1</sub>(20-100)% ASM treatment with average production of 45.4 g. The highest crop water productivity by ID<sub>4</sub>(20-100)% ASM treatment with an average water productivity of 1.24 g/l.

Keywords: deficit irrigation, vegetative phase, upland rice, and crop water productivity

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## **ABSTRAK**

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

**Oleh**

**NYOMAN NOVYANTA**

Padi merupakan salah satu bahan pangan pokok bagi masyarakat di Indonesia. Konsumsi rata-rata perkapita masyarakat di Indonesia mencapai 1,631 kg per minggu. Produktivitas padi di lahan sawah (5.293 Ton/Ha) lebih tinggi daripada lahan kering (3,113 Ton/Ha). Permasalahan utama dalam budidaya padi gogo lahan kering yang masih sulit ditangani adalah kekurangan air. Salah satu upaya yang dapat dilakukan untuk mengatasi permasalahan ini adalah memanfaatkan teknologi irigasi defisit.

Penelitian ini bertujuan untuk mengetahui pengaruh aplikasi irigasi defisit pada fase vegetatif tanaman padi gogo Varietas Inpago 9. Penelitian ini dilaksanakan di dalam rumah plastik laboratoritum lapang terpadu Universitas Lampung pada bulan November 2016 sampai dengan bulan Maret 2017. Penelitian ini menggunakan rancangan acak lengkap (RAL) dengan 1 faktor perlakuan (Irigasi defisit), perlakuan terdiri dari 4 taraf, yaitu ID<sub>1</sub>(20-100)% ATT, ID<sub>2</sub>(20-80)% ATT, ID<sub>3</sub>(20-60)% ATT, ID<sub>4</sub>(20-40)% ATT, dengan ulangan sebanyak 5 kali.

Hasil penelitian menunjukkan bahwa, aplikasi irigasi defisit pada fase vegetatif berpengaruh terhadap tinggi tanaman, jumlah daun, jumlah anakan, jumlah malai, dan kebutuhan air tanaman. Produksi padi tertinggi dicapai oleh perlakuan ID<sub>1</sub>(20-100)% ATT dan ID<sub>4</sub>(20-60)% ATT dengan rata-rata produksi sebesar 41,6 gram. Produktifitas air tanaman tertinggi dicapai oleh perlakuan ID<sub>4</sub>(20-100)% ATT dengan rata-rata produktifitas air tanaman sebesar 1,24 g/l.

Kata Kunci : irigasi defisit, fase vegetatif, padi gogo, dan produktifitas air tanaman.